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# bart impact program

## IMPACTS OF BART ON BAY AREA INSTITUTIONS OF HIGHER EDUCATION AND THEIR STUDENTS



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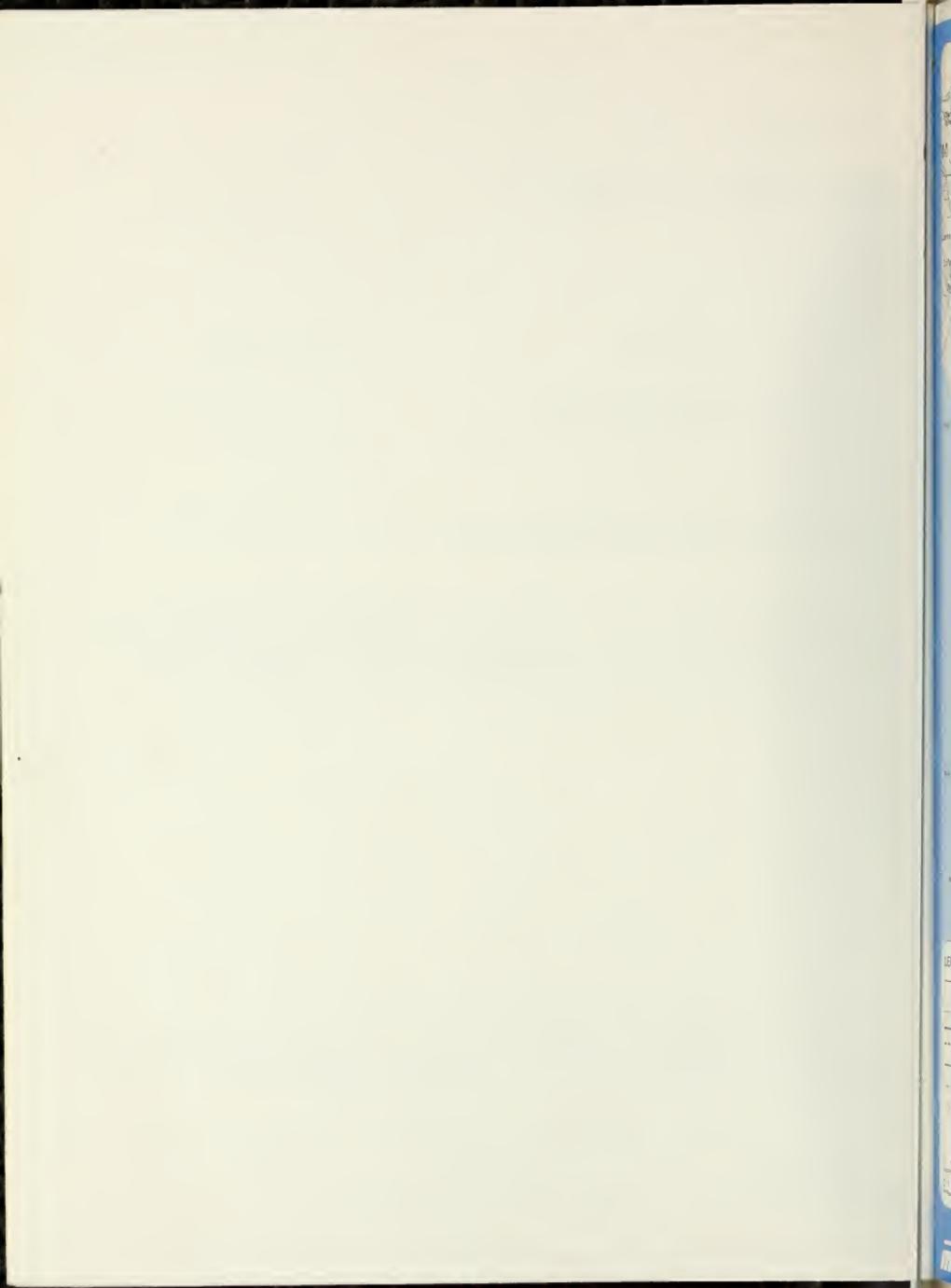
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16. Abstract  This report describes the impacts of BART upon institutions of higher education and student life styles. It provides findings on the impact of BART and mass transit systems on financial and physical considerations by campus administrators, and on choices of campus selection and life routines by students of "commuter" campuses, at ten selected universities and colleges in the San Francisco Bay Area.		
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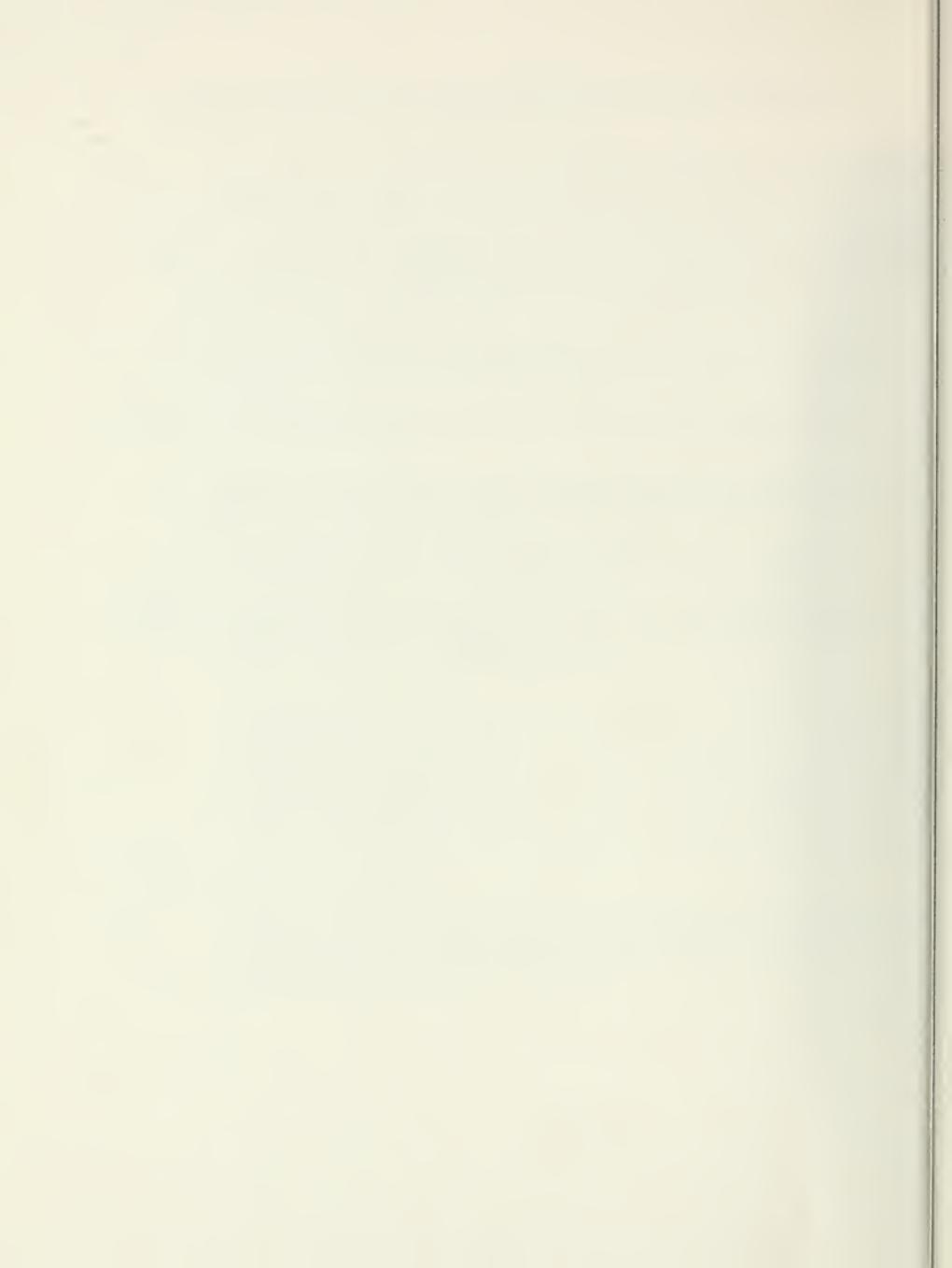
# BART: The Bay Area Rapid Transit System

<b>Length:</b>	The 71-mile system includes 20 miles of subway, 24 miles on elevated structures and 27 miles at ground level. The subway sections are in San Francisco, Berkeley, downtown Oakland, the Berkeley Hills Tunnel and the Transbay Tube.
<b>Stations:</b>	The 34 stations include 13 elevated, 14 subway and 7 at ground level. They are spaced at an average distance of 2.1 miles: stations in the downtowns are less than ½-mile apart while those in suburban areas are 2 to 4 miles apart. Parking lots at 23 stations have a total of 19,000 spaces. There is a fee (25 cents) at only one of the parking lots. BART and local agencies provide bus service to all stations.
<b>Trains:</b>	Trains are from 4 to 10 cars long. Each car is 70 feet long and has 72 seats. Top speed is 80 mph with an average speed of 38 mph including station stops. All trains stop at all stations on the route.
<b>Automation:</b>	Trains are automatically controlled by the central computer at BART headquarters. A train operator on-board each train can over-ride automatic controls in an emergency.
	Magnetically encoded tickets with values up to \$20 are issued by vending machines. Automated fare gates at each station compute the appropriate fare and deduct it from the ticket value. At least one agent is present at each station to assist patrons.
<b>Fares:</b>	Fares range from 25 cents to \$1.45, depending upon trip length. Discount fares are available for the physically handicapped, children 12 and under and persons 65 and over.
<b>Service:</b>	BART serves the counties of Alameda, Contra Costa and San Francisco, which have a combined population of 2.4 million. The system was opened in five stages, from September, 1972, to September, 1974. The last section to open was the Transbay Tube linking Oakland and the East Bay with San Francisco and the West Bay.
	Routes are identified by the terminal stations: Daly City in the West Bay, Richmond, Concord and Fremont in the East Bay. Trains operate every 12 minutes during the daytime on three routes: Concord — Daly City, Fremont — Daly City, Richmond — Fremont. This results in 6-minute train frequencies in San Francisco, downtown Oakland and the Fremont line where routes converge. In the evening, trains are dispatched every 20 minutes on only the Richmond — Fremont and Concord — Daly City routes. Service is provided weekdays only, between A.M. and midnight. Future service will include a Richmond — Daly City route and weekend service. Trains will operate every 6 minutes on all routes during the peak periods of travel.
<b>Patronage:</b>	Approximately 130,000 one-way trips are made each day. 200,000 trips are anticipated under full service conditions.
<b>Cost:</b>	BART construction and equipment cost \$1.6 billion, financed primarily from local funds: \$900 million from bonds being repaid by the property and sales taxes in the three counties, \$100 million from toll revenues of transbay bridges, \$315 million from federal grants, and \$100 million from interest earnings and other sources.

## PREFACE

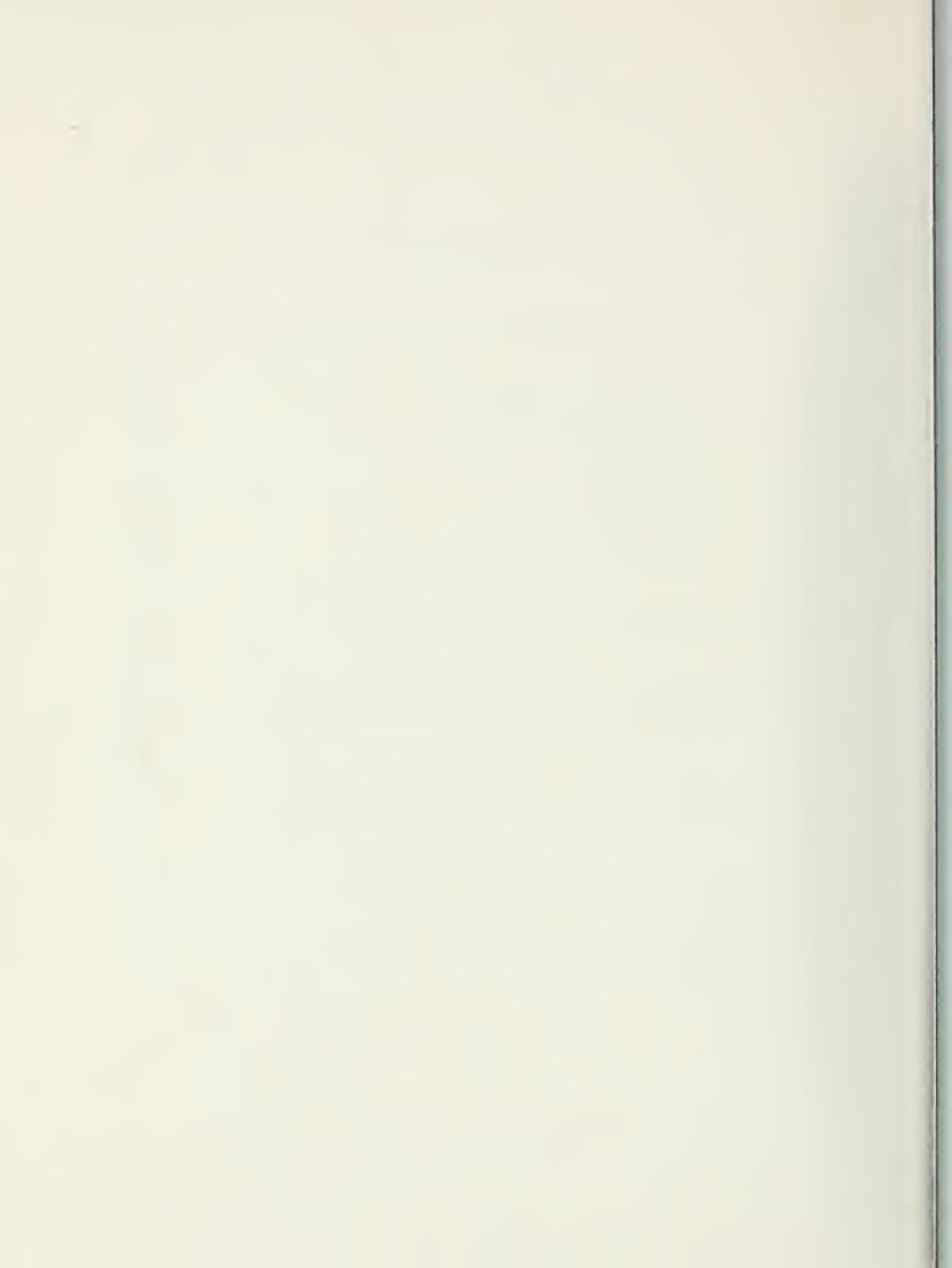
The BART Impact Program (BIP) is a comprehensive, policy-oriented study and evaluation of the impacts of the new San Francisco Bay Area Rapid Transit System (BART). The system's alignment and configuration are shown on the page preceding this preface. The BART Impact Program covers the entire range of potential rapid transit impacts, with major projects covering impacts on traffic flow, travel behavior, land use and urban development, economics and finance, social institutions and lifestyles, public policy and the environment. The incidence of these impacts on population groups, local areas, and economic sectors is being measured and analyzed. The benefits of BART, and their distribution, are being weighed against the negative impacts and costs of the system in an objective evaluation of the contribution that the rapid transit investment makes toward meeting the needs and objectives of the Bay Area and all of its people.

The Institutions and Life Styles Project focuses on the effects of BART on the Social Institutions and Life Styles of Bay Area residents. The project addresses the impacts of BART on three primary institutional spheres and their clients: local Political Institutions including community response to BART; Institutions of Higher Education and their Students; and Health Care Institutions and Clients. At the institutional level, analytic case studies are designed to assess BART-related changes in the organization of institutional activities, and to determine changes in the functioning of these institutions as they relate to changes in the social experience and expectations of their participants.



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## SUMMARY

The Higher Education Sub-Study addresses two questions: What has been the impact of BART on the colleges and universities in the Bay Area, and how has BART affected the life styles of the students attending these institutions. Answers to the first question were sought through exploratory interviews with administrators at 10 major colleges and universities. Additionally, documents which were supplied through these institutions (including survey data, where available) were studied, and further information was derived from personal observations on the campuses and in BART trains and stations. The latter question was addressed through 40 preliminary interviews with students from the 10 campuses, and 38 structured, in-depth interviews (lasting from 30 to 60 minutes) with students on campuses, in BART stations, and at feeder bus stations on the campuses.

### The Degree of BART's Impact

The broad answer to both questions, as revealed by these efforts, is that BART's impact to date has not been great, either on the Bay Area's college and university campuses or on the students' life styles. In numerical terms, BART's college-student ridership is still proportionately small.

At the four campuses from which a survey data base was available, estimates of BART ridership in 1976 at four different institutions of higher learning were somewhat varied. At City College of San Francisco, a comprehensive community college located in the southwestern area of San Francisco, 6.5% of the students and 4.2% of the faculty and staff utilized BART. At Golden Gate College, a graduate/professional institution located in downtown San Francisco with a student body comprised primarily of employed executives, BART was utilized by 16% of the students.

Data available at two other institutions show that the advent of BART in 1974 reduced somewhat the use of automobiles by student, faculty, and staff for commuting purposes. At California State University at Hayward, a comprehensive campus located in the southern part of the East Bay which offers Bachelor's and Master's Degrees, surveys indicate that BART ridership during the period from 1972 to 1976 increased from zero to 7.2% of the students and 5.9% of the faculty and staff.<sup>1</sup> At the same time, the percentage of those commuting by automobile dropped slightly, from 86% to 84.1% among students, and from 93% to 89% among faculty and staff.

At the University of California at Berkeley, which is a major research-oriented university located in the urban, north-central part of the East Bay, BART ridership among students rose from zero in 1970 to 8% in 1976, while the percentage of those commuting by automobile dropped from 20% to 15% in the same period. The U.C. Berkeley data suggest that BART's effect

<sup>1</sup>BART service began in 1973; zero ridership is prior to BART service

on auto use has been greatest for those making the longest trips; for example, among those traveling 6 to 10 miles to campus, BART use increased from zero to 10% between 1970 and 1976, while use of personal automobiles for commuting decreased by 31%.

Recommendation:

That the Metropolitan Transportation Commission encourage and assist all Bay Area colleges and universities in gathering reliable survey data each year on the transportation modes used by their students, the distances traveled, the areas in which students reside, and other indicators necessary to determine patterns and trends as they are affected by BART and other rapid transit alternatives.

Transit-Related Problems at the Campuses

Campus administrators at nine of the 10 campuses studied indicated they had given some attention to student transportation patterns, including BART ridership. This appears to be because these institutions have experienced broadly similar sets of transportation related problems. For example, four of the 10 had experienced pressures from community residents and/or students to improve on-campus parking opportunities and to free parking space in nearby neighborhoods. Most of these institutions found themselves reluctant to increase on-campus parking, because of its costs in space and funds, and the wide variations in parking demand over the course of an academic term.

At least five of the institutions articulated concerns of some type about students' ability to reach their campuses easily, and had either advertised their accessibility in BART stations or had mentioned BART in their informational brochures. Two institutions (California State University at Hayward and Diablo Valley College, a community college in suburban Concord) had successfully made efforts to obtain new feeder bus lines from their campuses to BART stations from local transit districts. Two others, the University of California at Berkeley and Mills College, a private women's college in Oakland, established their own campus-to-BART shuttle systems.

Despite these overlapping areas of concern, however, most of the 33 campus officials who were interviewed appeared unaware that other Bay Area campuses had wrestled with problems similar to their own. Several officials, when approached by the study staff for information, expressed an interest in learning more about the problems, policies, and data-gathering efforts of other campuses. This was supplied briefly by the study staff whenever feasible.

Recommendation:

That the Metropolitan Transportation Commission encourage Bay Area campus officials to communicate and cooperate actively with each other in identifying and solving recurrent transportation-related problems with which they are faced, and that MTC offer its assistance in this process.

BART's Place in Student's Life Styles

Beyond the question of how much impact BART has had on Bay Area campuses, our major concern in the Higher Education sub-study was to explore what kinds of impacts BART has had on students' lives. Early in the research, it became clear that no simple, one-way "impact" of BART was to be discovered. Instead, students made it clear that they use BART and fit it into their lives, or ignore it, and that it influences but does not determine their life styles in the process.

As to specific influences, it appears that one of BART's most significant effects (so far as it has any on college students) is to support the pattern of commuting to campus, which is so widespread at California institutions of higher education. Blessed with good weather, oriented to the automobile, and lacking the eastern United States' tradition of private, residentially centered colleges, California citizens have long chosen to build relatively few residence halls at their college campuses, and have relied on home to campus commuting as a dominant pattern. With the exception of small, private colleges (such as Mills College in our sample), California campuses rarely attempt to house large proportions of their students in dormitories, and many colleges (both two and four year) make little or no college-operated housing available to students.

Some campuses, such as U.C. Berkeley, are surrounded by large numbers of student-occupied, commercially-run apartment buildings and private homes, so that high proportions of students can walk or bicycle to classes. Others, such as California State University at Hayward, have no on-campus student housing, and draw most of their students from residential communities some distance away. Having been built entirely in recent decades, many California institutions, when considering the addition of student residences near the campus, have found high interest rates and costs of construction prohibitive.

The BART system, as one new and attractive method of student commuting, appears to fit smoothly with this pattern of off-campus residence and daily travel, although it cannot, of course, be said to have produced it. The commuter campus pattern itself is a very consequential one, and is a source of concern to many educators, since it carries with it many difficulties in sustaining a campus "life" for students, and has been shown to attenuate some of the changes and growth which college attendance has been designed to bring about.

Other dimensions of BART's place in students' lives are coherent with the demands of the commuter pattern. BART is seen by most of our student respondents as "safe, clean, and comfortable," and in general is viewed as a thoroughly desirable means of commute travel. The system fits the requirements of a wide range of residence and home patterns. For young students who live in their parents' homes under their supervision, BART appears to be a clean, safe, and therefore acceptable control device--a vehicle to which still immature sons and daughters can be entrusted. By contrast, BART is used by some freedom-seeking young people as a way to be gone from their parents' home for extended periods each day, despite the unavailability of the family car. It allows some students, already largely free of their parents' control, to live in student communities (e.g., Berkeley) while commuting to other, less academically selective campuses (such as Laney College in Oakland). Finally, a number of married students, members of today's "two-career" families, find that BART allows them to commute long distances (e.g., from San Francisco to U.C. Berkeley), while their spouses walk to work or claim the use of the family automobile.

Some students find BART trains an ideal place for study, before and after campus classes. However, an approximately equal number of our interviewees said they find the BART ride unsuitable for study. They view the BART commute instead as a hiatus, a time to be spent reading for pleasure, for daydreaming, or for simply relaxing. These activities dovetail with a dominant impression of most students interviewed: that riding BART is not a communal, shared experience, but is primarily a solitary, isolating one. It allows a degree of privacy in a public setting and permits solitary activities such as reading and is not a setting which draws people together in shared pursuits or communication.

As a competitor to automobiles in student commuters' lives, BART is disadvantaged by the strong meanings which are attached to cars by young people in this culture. Among our student respondents, these meanings include feelings of "freedom," of being able to "come and go any time I want," of "door-to-door convenience." For a few (even among these BART riders), the social functions of carpools, and "sentimental attachments" to cars as symbols of a happy social life with peers are strong inducements to continued automobile use. By contrast, the burdens of scarce parking spaces, of heavy traffic, and of costly gasoline and maintenance tend to deter students from using cars, and to help make a place for BART in their lives. A small but significant number indicated some chance event (such as a car breakdown, or a bus strike) made them first aware of BART's potential and resulted in conversion to regular BART ridership.

As an alternative to existing buses and streetcars, BART appears to fit most appropriately in life styles oriented to quiet, cleanliness, comfort, and speed of travel, relatively isolated from the hurly-burly of "dirty," "noisy," and even "smelly" urban life, with which other forms of public transit seem, by contrast at least, to be associated. Some

modification of the general approbation of BART on these scores is occasioned by students' widespread impatience with BART's perceived lack of prompt and reliable schedules--an impatience which may in itself reflect many students' absorption with learning to use their emerging personal freedom, and to regulate their own lives. BART is considered relatively "expensive" also, by most of our respondents, although many who said so also indicated they intend to continue riding it nevertheless. A few students, stating that BART's fares are a significant item in their carefully constructed budgets, also considered them a reasonable "cost of education," because BART allows them to live in inexpensive locations and/or to commute to low cost institutions.

As an element in students' choices of which campus to attend, BART appears to be simply one among many factors considered--including, prominently, the institution's cost, specific programs, and general level of prestige. However, BART has occasionally been a crucial factor in such choices, as when a student wishes to study in a program far from his or her chosen home, and this is made possible by a convenient BART line, such as the one running from San Francisco past the California State University at Hayward campus in the East Bay.

When asked to associate BART with broader aspects of their lives which concern them, such as their developing conceptions of self and of the future, most of our respondents tied BART to optimistic feelings and to themselves as persons "in step with the times," as self-reliant, self-directing, and competent individuals. However, many students also associated "the BART experience" with a recurrent sense of unreality, a break in the activities of "normal" life, and a rather artificial, futuristic functionality. In keeping with these impressions and with reports of BART's isolating, comfortable air, a surprising number of students volunteered criticisms of BART as a "middle class" phenomenon--more expensive and comfortable than is felt justified for a public service designed to serve those who most need it and whose taxes pay for it. Thus, as a much-publicized symbol of the modern, functionally organized society with which "middle class" life styles are often associated in this country, BART seems to elicit from many of its student riders the same combination of attraction and mistrust with which they view other aspects of these central American values.



## I. INTRODUCTION: PURPOSES AND SCOPE OF THE SUB-STUDY

This is a report of the sub-study on Higher Education, within the Institutions and Life Styles Study (ILS) of the BART Impact Program. The ILS Study was designed to explore the impact of BART on life styles and institutions within the San Francisco Bay Area, and included a focus on the area's institutions of higher education and their students.

The purposes of the sub-study were several. One objective was to add theoretical depth and a new fund of social/institutional data to what is generally known about BART's impact on the social lives of those it serves. This goal required taking seriously as a theoretical base the notion of "life style," which has been infrequently and variously used as an organizing concept by social scientists. Thus, deliberate efforts were made to refine and apply one version of this concept in an empirical investigation. Because our primary focus of interest is BART's impact, however, our inquiry has been restricted to exploring those aspects of life style which are influenced by, and in turn influence, the uses of mass transit in urban settings. Our broad theoretical posture is discussed in Section II.

The sub-study also was designed to be exploratory rather than definitive and hypothesis testing in its data gathering and analysis. Given the general dearth of sociological information about transit and life styles, it was judged important that ILS, and this sub-study in particular, maintain a relative openness in its interviews and emphasize inductive inference in its analyses. Budgetary restrictions prevented undertaking a large sample survey, with its greater assurances of statistical representativeness, and, therefore, also dictated an exploratory, ethnographic approach.

Finally, in line with its exploratory character, the sub-study was designed to uncover avenues for future research to pursue. This report will attempt to suggest some of these in passing, as they concern higher education and its students.

In scope, the report deals with ten university and college campuses, chosen to include institutions, public and private, large and small, oriented to research and teaching, and having a diversity of student populations. Profiles of the ten institutions' major interactions with BART are drawn in Section II, with findings based on documents obtained from these campuses and on interviews with campus officials. The student interview data are analyzed separately around a number of themes and elements emerging from the discussions which were held with the interviewees about mass transit and their life styles.

Section II concludes the report by summarizing its conclusions. Section IV describes the methods of the sub-study in greater detail.

## II. FINDINGS

### A. THE IMPACT OF BART ON BAY AREA COLLEGES AND UNIVERSITIES

The ten colleges and universities selected for analysis of BART impacts<sup>1</sup> are considered primarily as formal organizations which embody certain social values, such as respect for advanced, structured learning, the hope for social progress through mass education, opportunity for self-advancement by youths through disciplined study, and society's provision of a period in which young adults may test their independence from parents and try out possible occupational choices. Some of these values, as they are impinged upon by BART's influence in students' lives, are discussed in the following section on student life styles.

In considering colleges and universities as formal organizations, our guiding conceptual distinction (Blumer, 1969) has been the familiar one between the formal and informal patterns of organization which coexist in all institutional structures. (Blau and Scott, 1962) That is, all formal organizations have their explicit authority structures, declared goals, and official policies designed to govern and influence the activities of their members and clients. Colleges and universities, like most organizations, employ staffs of full-time administrative officials, whose task it is to define these policies, carry them out in light of the declared goals, and monitor the success of the venture--not in a precise way, usually, but as judged in the administrators' discretion to serve "the best interests of the institution." (Lunsford, 1968) Academic institutions, for example, are dependent primarily on the numbers of students they enroll for the base on which their financial support is determined--through student tuitions, public appropriations, or allocations of student financial aid from government sources. Thus, academic executives must be concerned with the (actual or perceived) accessibility of their campuses to the student clienteles which they purport to serve, and a number of Bay Area campuses make explicit mention in their official brochures for prospective students of their accessibility via BART and/or other public-transit modes. In past years, location near good highway access and ample on-campus parking space have also been considered institutional assets. Currently, however, these same academic executives must be concerned with other forces which affect their institutions' fortunes. These include the parking problems and traffic congestion which attend students' heavy dependence on cars; political pressures from neighborhood residents; and the fouling of the campus environment which follows upon such congestion. As a result, a number of campus administrators (and sometimes organized groups of "student leaders") have embarked on further efforts to link their

<sup>1</sup>See the Appendix for a list of the institutions and the characteristics on which they were selected.

campuses' fortunes with emerging patterns of public transit. Recently, these efforts have involved some symbolic linkage to the BART system, which had been hailed as a technological marvel in the Bay Area and model transit system for the nation's future.

It is in this context, for example, that Mills College in Oakland, striving to create linkages with other Bay Area campuses and thereby to reduce student isolation at its encloistered campus, simultaneously created a highly innovative cross-registration arrangement with U.C. Berkeley and began active encouragement of students' using BART for ease of inter-campus travel. In the same context, both Mills and U.C. Berkeley helped their student leaders to create shuttle buses from nearby BART stations to their campuses--despite the fact that, in the one case, the service overlapped with AC Transit<sup>1</sup> coverage, and in the other the shuttle soon came to carry more students in cross-campus travel for non-BART purposes than for travel to the BART station, one block from the campus border. California State University, Hayward still advertises its accessibility by BART in brochures and on the moving signs at BART stations, hoping to stimulate its lagging enrollment growth and make better use of its expensive, new campus.

By such means, academic executives attempt to affect the practices of potential students and those already enrolled, in the best interests of their institutions and (where compatible) of collateral social values such as reduced air pollution. Greater use of BART and reduced student dependence on cars appear, in the eyes of most academic executives, to be policies which currently serve both institutional and societal values. No opposition to greater BART ridership among students was encountered among the college and university officials interviewed in this sub-study. Attitudes ranged from mild interest, based on slight hopes that BART will help the particular campus, to determined and enthusiastic support of BART as a new transit alternative.

Most participants in formal organizations do not, however, plan their lives or orient their participation primarily in accordance with institutional policies devised and promulgated by administrators. They tend to approach public transit, for example, primarily as a personal tool or as a burden, to be used or avoided by them as it seems to fit their personal needs, and the patterns of life to which they have become accustomed or to which they aspire. The results are very often at variance with the intentions of institutional administrators, either because hoped for effects are not realized, or because unanticipated, and perhaps undesired, consequences eventuate.

Some analytic comments on the apparent success, lack of success, and unanticipated consequences of administrative actions (such as the provision of ample parking space near a campus) are included in the

<sup>1</sup>AC Transit operates local, express, and transbay bus service in the East Bay area.

institutional profiles which make up the body of this section. The section which follows, focussing on the life styles of students from a cross-section of our institutional sample, provides evidence of the orientations to BART with which students begin, and the patterns of their lives which result from the interactions of these orientations with BART's reality.

Let us turn now to the profiles of ten Bay Area college and university campuses for summaries of their individual characters, and their relationships to BART as a means of rapid transit.

o City College of San Francisco

The City College of San Francisco (CCSF) is a two year, public, coeducational community college, located near the Balboa Park BART Station in the south central part of the City. It offers tuition-free vocational and university-parallel programs in more than 50 departments and occupational fields. Admission is open to all high school graduates and to non-graduates, 18 years of age and older. CCSF is widely understood, on campus and off, to be a "people's college" which provides educational opportunity to large numbers of low-income students. More than half the present student population is non-white, and officials indicate that this proportion continues to grow. The entire CCSF enrollment has grown rapidly over the past decade to its current 14,000 student level. However, a five per cent ceiling on increases in State support for new enrollments has led College officials in the past year to consider deliberately limiting future growth.

An October, 1974 survey of 6,006 CCSF students, undertaken by the campus police office, indicated that nine per cent rode BART regularly to and from the campus, while 47% drove or rode in an auto or on a motorcycle, 37% rode the Municipal Railway ("the Muni"), and 7% walked or rode bicycles. The survey report inventoried 1,213 student parking spaces and 616 faculty/staff spaces on the CCSF campus, with 2,503 additional spaces in the neighboring vicinity. The College public affairs office reports that parking is a continual problem at CCSF, with frequent complaints from nearby neighborhoods that students are improperly parking in residential areas, walking on lawns, and littering streets. CCSF officials indicated they meet regularly with neighborhood groups, with the City Traffic Engineer, and with others in efforts to solve traffic and parking problems. A more recent survey indicated that by Fall, 1976, the percentage riding BART had fallen to 6.5% among day students, and was at only 3.3% among evening students.

Since over four times as many CCSF students ride the Municipal Railway as ride BART, campus administrators' efforts are primarily directed toward improving Muni service to the campus. They hope that Muni will carry out its stated intention to create a mini-Metro station near the Balboa Park BART station, on a site presently used as a Muni repair shop and carbarn. These negotiations are complicated, however, by the

College's opposition to Muni plans for storing buses near the campus on one of two covered reservoirs which many CCSF students and staff use for parking.

The College's promotion of BART use may also be complicated by the apparent perception of some College administrators and faculty that the Balboa Park station is an uncomfortable distance from the campus. Two officials and two faculty members, interviewed there, spontaneously used the imagery of "down on the other side of the freeway" (Highway 280); one official estimated its distance at seven blocks from campus. By contrast, several students, when asked for directions, stated that the BART station was "only a short way," or "just a block or so" from the campus. Actual observation showed the Balboa Park station to be two long blocks from the main part of the CCSF complex, requiring a 10-minute, uphill walk to the campus. Several persons explained that normal weather at the hilly CCSF campus is chilly, foggy, and windy, which makes walking unpleasant and the door-to-door service provided by Muni buses attractive to students and staff. In addition, institutional officials suggested that the perceived distance of the station from the campus may be increased by the necessity of crossing Ocean Avenue, which brings a heavy flow of automobile traffic to the campus's western edge. Officials said that several students had been injured recently by cars, while crossing Ocean Avenue, and that attempts were being made to obtain an overpass for students' use.

Student interviews suggested that many CCSF students, though of modest means, do use BART to reach City College from Chinatown, the Mission District, and other City neighborhoods. Two respondents described their route from upper Powell Street via cable car, BART and walking to campus (requiring 30-40 minutes and costing 85 cents one-way, as compared to the alternative Muni bus route, costing at most 50 cents but consuming more than an hour in travel time). They indicated that they and their friends switch between the Muni system and BART from day to day, depending on their time constraints, the cash available to them at the moment, and their desire to avoid crowded Muni buses at rush hours.

In sum, while their campus is almost as close to a BART station as it could be, CCSF students depend primarily upon auto travel and the Muni Railway's crowded but inexpensive, door-to-door service from many parts of the City. BART appears to have only a minor place in the consciousness of the campus, although its tracks are clearly visible from the campus heights. In part, these apparent anomalies may be explained by the lack of BART service to and from most of the neighborhoods in which CCSF students make their homes, and in part by the importance of BART's relatively high cost in the travel budgets of CCSF's predominately low-income student population. However, basic auto dependence, students' distaste for walking in a hilly, chilly area, and the barrier created by Ocean Avenue traffic may also be important. These obstacles may be

overcome, in part at least, by CCSF efforts to have the Balboa Park station's name changed to City College Station, and to create an overpass for Ocean Avenue. Encouragement of these and other efforts by BART and MTC officials would seem, therefore, to be in the interests of increased public transit use by more CCSF students.

o Golden Gate University

Golden Gate University (GGU) is a private, nonprofit, university with its main campus at 536 Mission Street in downtown San Francisco. The University enrolls some 9,000 students in bachelor's, master's and doctoral programs focussed primarily on business administration, also including public administration, transportation management, and law. Over four-fifths of GGU's students work, most of them full-time. The University's programs are aimed primarily at middle-management executives who wish to improve their mobility, both within and between private corporations and public agencies. About 4,700 GGU students use the Mission Street campus; the balance are served at 12 outlying centers on military bases, in corporate training programs, and in 14 other Bay Area cities. Over a third (34%) of GGU's San Francisco campus students are enrolled in two or three classes. Most GGU classes are held in the evening, with 6:50-9:30 classes typical. A 1974 GGU survey revealed that students' incomes ranged from \$9,000 to more than \$70,000 per year, with the modal annual income near \$16,000.

Of this very distinctive student body, GGU officials estimate that the greatest majority who use the Mission Street campus walk or ride local transportation from their workplaces in the City. A Spring, 1976 survey<sup>1</sup> of 2,095 GGU students at the S.F. campus indicated that almost a third (32%) drive to San Francisco for combined work and study purposes, while less than half that number (14%) drive there solely to attend the University. Similar combined purpose travel may be characteristic of those who use other transportation modes: 16% ride BART, 12% ride AC Transit buses, 11% ride the Municipal Street Railway, 6% use carpools, 5% walk, 2% use the Southern Pacific commuter train, 2% use Golden Gate Transit, and less than 3% use motorcycles, bicycles, or other means of travel to reach GGU. These students come from 14 different counties, according to the survey, including San Francisco (39%), San Mateo (14%), Alameda (21%), Contra Costa (10%), Marin (8%), Santa Clara (3%), and others.

As at other Bay Area campuses, therefore, students driving their own cars form the largest single proportion of travel choices at GGU, almost half (46%) of those surveyed. The proportion riding BART to GGU is also high, however, when compared to rates at other campuses where surveys have been done (it is exactly twice the rate at U.C. Berkeley, for example). This may be attributed in part to the high-income, fully-employed status of most GGU students, who hold executive positions for

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<sup>1</sup>Courtesy of Smith D. Hicks, Assistant Business Manager

which they are well paid, and for whom the cost of travel to GGU is part of their cost of travel to the job in which they earn their livelihood. The style of life of such students may also encourage them to ride BART in larger numbers, since there is some evidence (discussed later) that an efficiency oriented, middle-class way of living is seen as especially well supported by BART ridership. BART ridership to GGU may also be influenced by the long commuting distance travelled by many students, by the cost of parking near the campus, and by GGU's location in downtown San Francisco, within easy walking distance of both the Montgomery Street and Embarcadero BART stations.

BART's popularity seems to hold here despite competition from other public transit modes. The East Bay Terminal, within one block of the GGU campus, puts students in touch with AC Transit buses to the East Bay, and with Muni buses and streetcars covering San Francisco. In addition, commercial "jitney" car pools serve the area along Mission Street, and Greyhound bus stops serving Napa County are located within blocks of the GGU campus. Thus BART's attraction to GGU students is not the lack of alternative public transit access.

Perhaps because of this wealth of transportation nearby, GGU officials indicate they have spent little time discussing BART or considering its impact on the University. Even parking is said by campus officials to be only a minor problem; it is assumed that students solve their parking problems at commercial lots. GGU students attending evening classes can park nearby, one official said, for special rates of \$1.00-\$1.25 per night. The 1976 survey showed that almost all of the 14% who drive solely to attend GGU do so for evening classes, so their parking needs occur at hours of non-peak demand on downtown parking facilities.

Almost three-quarters of GGU's students (70%) attend evening classes solely, so the advent of full evening service by BART seems likely to have been important. No data on pre-evening service ridership are available at GGU, but officials estimated the change had had a "modest" impact (diverting some students to rapid transit).

In summary, BART appears to serve an important segment of the students who attend GGU and who, for the most part, also work full- or part-time in the City, earning good incomes and studying at the University in the hope of earning still more. In the face of competition from several other transit modes, BART's proportional impact on this student body appears to be greater than that at any other Bay Area college or university studied.

- o San Francisco State University

San Francisco State University (SFSU) is a large, public institution located in the southwestern part of the City, awarding bachelor's,

master's, and (in conjunction with U.C. Berkeley) doctoral degrees in a broad variety of professional fields as well as in the liberal arts and sciences. Its modest tuition fees (\$95 per semester) and urban location bring the University a largely middle- and lower-income student body with considerable ethnic diversity. These factors, with the variety of its programs and the excellence of its general reputation, bring students to its campus from all over the Bay Area and from other states. However, just under two thirds (63%) of SFSU's students come from within the City of San Francisco.

Almost all SFSU students live at home and commute to the campus. The Park Merced and Stonestown areas nearest the campus are largely upper middle-class residential districts, with few apartment buildings or homes suitable for student apartments. Residence halls are maintained by the University for only 2,000 of its approximately 24,000 students. As a consequence, SFSU students are heavily dependent on transportation for their college attendance.

According to a 1973 survey conducted by SFSU officials, and covering 16,000 of the then 22,000 student enrollment, about 61% of all students drove their own cars to campus. (BART had not yet begun San Francisco operation in 1973.) Less than one per cent rode as auto passengers, and less than three per cent indicated they shared carpools. About a quarter (26%) said they used public buses and streetcars of the S.F. Municipal Railway, while about seven per cent used other transportation modes (bicycles, motorcycles, or walking).

General auto dependence has resulted in a massive, continuing parking problem for the campus. The University maintains 2,500 student parking spaces available for 25-cent entry; another 700 spaces are reserved for faculty and staff. Hundreds of students, however, park in surrounding residential areas. According to University officials, some students walk as much as two miles to the campus after parking their cars. (However, bicycle use by students has quadrupled within a few years, as secure bike racks have been provided on campus, and some students now bike from their automobile parking spaces.) Pressure from nearby communities on the parking issue has been "terrific," according to J. Dean Parnell, the University's Campus Development Officer, who deals with such issues. Several communities have organized around their problems, he said, and have succeeded in instituting one hour parking zones on their streets, which make students' long-term parking there effectively impossible. Use of campus parking spaces peaks sharply at the early morning hours and early in each semester, Parnell said. By midday, six weeks into a semester, there frequently are empty spaces available and untaken, since many students drop out of courses, or attend them irregularly, as the semester progresses. Consequently, the University is reluctant to spend more of its scarce resources to provide additional on-campus parking.

Buses and streetcars of the Muni Railway were the exclusive public transportation available to SFSU students before BART began its operations. According to Parnell, "Most of the City is accessible by Muni." The same cannot be said of the Peninsula (from which Falcon Charter buses run to downtown San Francisco, but not to the SFSU area), or of Marin County. Besides its encouragement of computer-assisted carpooling arrangements, the SFSU administration has held some discussions with the Golden Gate Bridge District toward the creation of commuter bus clubs; so far, no results have been forthcoming. About 20% of SFSU students come from Peninsula communities, about 6% from Marin County and farther north. Parnell indicated there is great hope for SFSU students' using the projected Muni-Metro system (now under construction), with its expected improvement of Muni cars, of the Twin Peaks tunnel, and of Muni service generally. "We're right on the tracks (of its western run)," he said. If Muni cars and service are improved, he suggested, students' use of public transit may substantially increase.

No current data are available on SFSU students' ridership of BART, officials indicated. In the Fall, 1973 survey, about one-eighth (12%) of the 16,000 respondents reported they expected to ride BART once it began its San Francisco operations. An undetermined number of SFSU students now take Muni buses from the Balboa Park and Daly City BART stations to the campus area, and others transfer from BART to the Muni's "M" car at the Powell Street BART station SFSU officials said. However, no accurate estimates are available as to how many do so. Perhaps 200 SFSU students ride BART regularly from the East Bay, one official guessed, despite the fact that more than 12% of the campus's enrollment comes from that area. Most East Bay students are from Berkeley and north, one administrator said, and many of them are deterred from using BART by the delays and inconvenience involved in transferring from the Richmond-Fremont line to the Concord-Daly City line--before transferring again to the Muni at Powell Street or Balboa Park. The Berkeley-SFSU trip by BART presently takes from one to one and one-half hours. If there were peak-hour direct trains from the northern East Bay to the City, Parnell suggested, the time savings might substantially increase the BART ridership of SFSU students from that area. Other improvements in convenience would require "almost a dedicated Muni line to the University" from Balboa Park, Parnell said--since current Muni connections with BART are uncertain in scheduling, their routes have been changed several times, and a half-hour, round-about trip is now required for students to cover the one-mile distance from the BART station to the campus.

In summary, San Francisco State University is an important campus serving students from San Francisco, the East Bay, and the Peninsula. BART's impact on SFSU as an institution could be considerable, since the campus is very much at the mercy of students' car dependence and would benefit from better coordinated public transit operations, both in BART's East Bay service and between BART and the S.F. Municipal Railway. Negotiations

to these ends would seem to be a fertile field for intensified cooperation and experiment between SFSU and these two transportation systems.

o University of San Francisco

The University of San Francisco is a 120-year-old, private, coeducational university affiliated with the Roman Catholic Church. It is located at 2130 Fulton Street, high on a hill a few blocks northeast of the Golden Gate Park. It awards bachelor's and master's level degrees in the liberal arts, business, nursing, and law. Its 3,500 undergraduates and 900 graduate students come from all over the Bay Area (75% of them), but also from every state in the U.S., and (some 10%) from other countries. A wide income range is represented, with about one-third of USF students receiving some form of financial aid. About half of all USF students work at some time while attending school. Tuition charges are \$1,300 per semester. A total of 1,125 students (mostly freshmen) live in dormitories provided by the University; however, many others walk to campus from apartments in nearby areas of the city. Eight to ten per cent of USF's students are members of ethnic minorities.

No precise data are available on USF students' modes of travel to and from campus. Of those who commute, however, University officials estimate that the vast majority ride the Municipal Railway. According to one official, USF is connected to BART by the Muni #31, the "Balboa Express," which makes a 15-minute run out Turk Street from the Powell Street BART station. Many students also ride the Muni #5 out McAllister from Powell Street, the official said.

The typical, severe parking problems of the modern urban campus also plague USF commuters. The University provides 230 spaces on campus, and calculates that another 330 are to be had in nearby neighborhoods. Spaces are difficult to find at peak hours, and pressures from the neighborhoods have been felt by University officials. According to one, when USF wanted to build a new building on campus, campus authorities "had to assure the neighborhood that new parking spaces would be added along with it." Despite these parking problems, car dependence appears to be a characteristic of many USF students and staff. According to campus Public Safety Director Jeff Levin, many drive to the campus from homes relatively short distances away. Some parking pressure is alleviated by the 100 University-fostered student carpools which are currently in operation.

Several USF officials, who themselves ride BART part of the time from their East Bay homes, estimated that only a few USF students do the same. Some students live on or near campus during the week, and use BART on Fridays for weekend trips to East Bay homes, one said. Another, who commutes from Walnut Creek daily, beginning at 6:20 a.m., has found that

he can arrive at his USF office by 8:00 a.m. ("just ahead of the traffic"), if he drives his car; on BART and the Muni, he says, he can rarely make it before 9:00 o'clock. His car expenses are much greater than his BART/Muni costs if he drives alone, but with two passengers he can "beat the (public transit) cost easily." The inconvenience involved in arranging carpools, and the need to do work at off-campus locations, encourage these officials to drive their own cars most of the time.

Because of its high proportion of students living on campus and in nearby neighborhood apartments, USF has fewer cars bringing parking pressure on it than do some urban campuses. However, USF's restricted on-campus parking and community concern about students' cars, added to a certain amount of car dependence among its students and staff, make its need for convenient public transit access clear. Currently, BART access to USF appears to be confined primarily to East Bay traffic, which depends on Muni connections to its Powell Street station.

- o Laney College

Laney College (LC) is a public, two-year community college enrolling about 15,000 students. It is the largest campus of the Peralta Community College District, which encompasses much of Oakland, Alameda, and Berkeley. Its relatively new, functional modern campus is located near Lake Merritt and the Oakland Museum, a ten-minute walk from downtown Oakland. Admission is open to all high school graduates and to all 18-year-olds, and there is no tuition charge for California residents. As a consequence of these characteristics and its broad range of vocational and college-parallel programs, Laney draws its students from all over the Peralta district and from a wide range of ethnic and income groups. According to Registrar Barbara Nidever, over two-fifths of Laney's students are Black, a slightly smaller proportion are Anglo-Caucasian, and the rest are Asian-American, Chicano or Mexican-American, Native American, and "other ethnic" (e.g., Italian-American). The average student is age 25. Over two-thirds are part-time students, and almost two-fifths attend evening classes. Thus, Laney College students are relatively mature in years, ethnically diverse, and probably of modest incomes.

No clear data are available on modes of travel by Laney students. Located centrally in Oakland, the College enjoys efficient bus service from most parts of the East Bay, and is across the street from the Lake Merritt BART station. Several college officials reported impressions that "floods" of students leave campus after major class hours, headed toward the BART station, and that BART ridership may comprise a substantial minority of Laney commuters. Because of its city-center location, almost no students live within easy walking distance of the campus. However, large proportions are thought by College officials to drive their cars to campus. Parking lots provided by BART adjacent to the Lake Merritt station are said to be used in some cases by students who commute to Laney College by car.

Because transit alternatives are available, College officials appear unconcerned about the transportation used by their students. As one official put it, "BART is not a problem to us, it's a boon. So it's not a high priority item for us. When things are going well, we don't poke at them." The College has no articulated policy towards BART, beyond mentioning it in their official brochures, and it places no advertisements in BART stations, officials said; BART, by contrast, draws attention to its connection with the campus by labelling one wall of its Lake Merritt station with the words "Laney College" in large letters.

In summary, Laney College is an urban-centered campus serving a broad cross-section of East Bay students, from a variety of socio-economic backgrounds. Our student interviews suggest that BART is a relatively expensive, but highly convenient, means of access for many Laney students, and BART may carry a substantial proportion of them to and from class. To date, however, official notice of BART as a matter of concern is very much muted, and no survey data on BART ridership could be obtained.<sup>1</sup>

o Mills College

Mills College is a private, residential, liberal arts college for women, located on a wooded, enclosed campus, 20 minutes from downtown Oakland. Its 865 students (now including a few men in its Master's degree programs) are carefully selected on academic criteria. The College offers a broad range of liberal and fine arts curricula, in the tradition of Eastern private colleges, of which it is one of the few prestigious West Coast counterparts. Tuition is \$3,240 per year, and until recently all unmarried students were required to live on campus in residence halls. In recent years, however, the number of non-resident students accepted has grown to the current figure of 215 (one-quarter of the student body). While Mills actively seeks ethnic and geographic diversity in its student body, and a substantial minority receive some financial aid from the College, most of its students are from white, middle- or upper-middle-class families.

<sup>1</sup>Data gathered in the 1976 Passenger Profile Survey of the BART Impact Program indicate that some 540 BART riders per day give the Lake Merritt station as their destination and "school" as their trip purpose. It is a reasonable inference that all, or almost all, of these persons are en route to Laney College. This number constitutes only 3.6% of Laney's approximately 15,000 students--a surprisingly small proportion, based on impressions gained from observations at the campus and at the Lake Merritt station itself. It is possible that unintentional under-sampling of young people and minorities accounts in part for the small number reported in the Survey.

The Mills College administration appears to have been one of the Bay Area's most transit oriented campus administrations in recent years. To reduce the concerns of students and their families about its isolation in a congested urban area, Mills has long provided ample on-campus parking. With the last decade's growth of non-resident enrollments, this space is now frequently filled during Monday-Wednesday-Friday peak class hours. However, until recently, Mills students who drive have been accustomed to parking, as one said, "right outside class." One of our interviewees suggested that this may have had the effect of encouraging continued student use of cars, as against dependence on public transit.

Impelled in part by high student drop-out rates in the past several years, Mills has inaugurated a far-reaching series of cross-registration agreements with other East Bay colleges and universities, including the University of California at Berkeley, Holy Names College in Oakland, St. Mary's College in suburban Moraga, the California State University at Hayward. Advertising itself as highly accessible to these institutions and to the Bay Area's other cultural opportunities via public transit, Mills has placed a relatively strong emphasis in its promotional brochures on the possibility of students' using BART and the AC Transit system for inter-campus class attendance.

During 1975, the Associated Students Organization, with administrative encouragement, arranged and financed a daily shuttle bus between the Mills campus and the Fruitvale BART station in Oakland. This shuttle, a yellow Volkswagen van driven by students, met students at Fruitvale "four or five times a day" during the Spring, 1976 term, and appears to have been regularly used, despite its overlapping in service with AC Transit bus service, which also connects the Fruitvale station with the Mills campus. College officials say the van's advantages were that it could be boarded in the center of the campus, was free, and ran frequently to fit with students' class schedules. In Fall, 1976, the van service was altered to run directly from the Mills campus to U.C. Berkeley and back--according to one campus administrator, because "the Associated Students had more money in their budget this year."

While proud of their innovative ventures in cross-registration with other colleges, Mills officials are reluctant to ascribe much influence to BART in making such ventures possible. An Assistant to the President said:

I don't think BART was very important in our starting the cross-registration, but it helped; we knew it would be available... It took me 40 minutes when I made the trip to Berkeley on BART... I think the van is expensive. But the students pay for it themselves.

Like most Bay Area institutions, Mills has so far gathered no systematic data on the transit modes used by its commuting students. The College employs a special representative to meet regularly with non-resident students, in two separate groups: One is composed of mature women who have returned to college after some years' hiatus, the other of 18 to 22 year olds, the "traditional" college age. This representative indicated she "(hasn't) talked with the students about transportation" in her periodic meetings with them. It is her impression that most of the older group travel in carpools ("they're good at making arrangements like that"), while the younger group may include a substantial proportion who use BART and AC Transit buses.

In summary, Mills College remains primarily a residential campus for well-to-do young women. Its 215 non-resident students include some BART riders, many of whom also use the student shuttle; precise data on their numbers are not available. Mills stands as a prime example, however, of an institution whose officials have chosen to emphasize the availability of first-rate public transit connecting its campus, not only to students' homes, but to the campuses and cultural attractions of the Metropolitan Bay Area. With its select female student clientele and its secluded but surrounded urban campus, Mills College has more need than most to see that its students have access to a clean, comfortable, and uncrowded mode of transit to other colleges. So far, there appears to be little affirmative evidence that BART is meeting this need for many Mills College students.

o Diablo Valley College

Diablo Valley College (DVC) is a public, two-year community college located in the small, suburban residential community of Pleasant Hill, east of the Berkeley-Oakland hills, 22 miles from San Francisco. It is tuition-free to California residents, and enrolls all high school graduates who apply.<sup>1</sup> Its 1976 enrollment, mostly part-time, is about 19,000 students. No precise data are available on the income or ethnicity of DVC's students, but officials indicate that a very small proportion are of ethnic minorities, and middle-class family incomes predominate. According to Dean of Students Verle Henstrand, most DVC students live at home, hold a job, and have the use of their own or their family's car. The College maintains no campus housing, but one official estimated

<sup>1</sup>Students from outside the DVC district may attend the College without charge by obtaining a permit from their own district office, which reimburses DVC. Like other Bay Area community colleges, DVC has limited "free exchange" programs which out-of-district students may attend without permit.

600-800 students live within walking distance of the campus in apartments averaging \$200 per month in rent. The College draws heavily from the surrounding suburban communities of Concord, Lafayette, Walnut Creek, Orinda and Danville, and from commercial-industrial Martinez. It receives some students from the major East Bay cities of Oakland and Richmond. Because of its tuition-free, open-admission policy, and its reputation for relatively high quality liberal arts programs, DVC is a first choice of many students who wish to attend college, but whose career goals are relatively unformulated.

BART's Concord line is connected to the DVC campus at the Concord and Pleasant Hill stations by an AC Transit shuttle bus, arranged for by those cities' public officials in consultation with DVC administrators, after a College-operated shuttle proved to elicit "little use" by students. The shuttle costs 25 cents and operates at 30-40 minute intervals, according to DVC officials. Students from Concord, Pleasant Hill, and Martinez frequently use the bus without riding BART, DVC's Dean Henstrand said, and many citizens ride the shuttle for non-College purposes between Martinez and Concord; for example, to shop at Concord's massive Sun Valley Mall. Students do ride BART from Walnut Creek, Lafayette, and Oakland to Concord or Pleasant Hill, and use the shuttle to campus; some of our interviewees indicated this constituted their only feasible transportation to DVC. It is also possible to construct bus-BART-shuttle combinations to DVC from Danville and the San Ramon Valley area; however, the trip requires some 80 minutes, and College officials believe that few students travel it regularly.

No systematic data on numbers of DVC students riding BART or using other modes of transit are available so far, Dean Henstrand indicated. However, it is evident that the vast majority of DVC students commute to campus by car. "Suburbia is always a problem without cars," the Dean said, adding:

During the gas shortage, a lot of students started leaving their cars home and travelling by BART. If we have another shortage, they might do that again. But, out here, even the buses don't go many places you want to go. That's why the shuttle between these cities has received so much non-College use.

The College has no policy to discourage automobile use by its students and does not advertise in BART stations. Parking is a problem during the first month of each College term when most students are enrolled. Because of the large proportion of enrolling students who drop out of classes, however, this problem is eased substantially later in the term, officials said. Pleasant Hill city officials have urged the College to solve the early-term congestion because of citizen pressures against students' parking in residential areas at those times. However, the

College has so far resisted creating additional parking spaces, Dean Henstrand said, because "we can't afford the vacant slots" later in each term.

In summary, Diablo Valley College is a suburban institution, receiving a small minority of its students via some combination of BART and a bus-shuttle system, which the College has encouraged and officially supported. Because the majority of DVC students travel by car to the campus and to their jobs in the larger suburban area, College officials apparently have no sense of heavy BART impact on the institution's fortunes or operation, apart from the kind of severe gasoline shortage which might drastically reduce students' use of automobiles. The College's initiation of BART-campus shuttle operation, and its subsequent support of the inter-city shuttle expanding this service, were, apparently, steps in a major public transit innovation for the surrounding suburban area. In this process, the existence of BART was one major influence.

o John F. Kennedy University

John F. Kennedy University (JFKU) is an innovative, private, adult-oriented institution located in a former public school plant, which it leases in suburban Orinda, just east of the Oakland hills. It enrolled 650 students in 1976, a large percentage increase over the previous year's 500 students, and more than double its last enrollment at the Martinez campus from which it recently moved. Average age of JFKU students is in the early 30's, according to JFKU's Vice President for Students Services and Administration. All are college juniors or above, and most are mid-career adults seeking upward or lateral mobility in their jobs. Average student income is estimated to be between \$10,000 and \$15,000 per year. About two-thirds are employed full-time, and the University is geared to the needs of the part-time student who continues working while studying. About half of JFKU's students are women; only a small proportion (perhaps 5-10%) are from ethnic minorities. One-third of the University's students are upper-division under-graduates, studying for bachelaureates in business and commerce, psychology, social science, or the humanities. Two-thirds are in graduate programs leading to Master's degrees in business, public administration, or psychology, or in the University's 175-student Law School. All JFKU classes are held in the evening, from 5:30-8:00, and from 8:00-10:30 p.m. Tuition costs are \$40 per unit for undergraduate courses, \$45 per unit at the graduate level. A normal student load may be two three-unit courses, at a cost of \$240-\$270 per academic quarter.

When JFKU moved from Martinez, its new location was chosen in part for its nearness to a major freeway (State Highway 24, running from Oakland through Walnut Creek), and to "convenient public transportation." BART's Orinda station is within walking distance of the JFKU campus. An AC Transit shuttle, which runs from the Orinda BART station up Moraga Way

to Moraga, St. Mary's College, and Lafayette, may be used by some JFKU students to reach the campus, but no data are available on this. Until BART's initiation of full evening service, JFKU students could not use its trains for fear of being stranded at the campus.

By far the large majority of JFKU students still drive to the campus, and no precise figures on BART ridership are available. Most students own their own cars and hold day-time jobs. Many attend JFKU from the nearby East Bay cities, especially from Berkeley, which has a high proportion of persons with the two or more years of college required for JFKU admission. These students could ride BART, she said, but the greatest majority of these also drive their own cars or form carpools.

The University is aware of BART's potential importance for student access, as evidenced by its purposeful location near a BART station as well as a freeway. However, at present there is little concrete evidence of an important impact of BART at JFKU, and no active University policy of encouraging BART use. Accessibility by BART is mentioned in JFKU brochures, but no emphasis on it is made in student recruitment efforts, and no announcements have been taken by JFKU in BART stations' moving advertisements. As with other suburban institutions, a heavy BART impact at John F. Kennedy University may await the advent of another major gasoline shortage.

- o California State University, Hayward

California State University, Hayward (CSUH), is a major public coeducational institution located on a completely new, modernistic campus in the rolling hills above Hayward, an East Bay suburban community 14 miles south of Oakland and 26 miles north of San Jose. Created by the State Legislature in 1957 to serve fast-growing southern Alameda County, CSUH itself has grown rapidly to its present enrollment of more than 11,000 students. It offers bachelor's and master's degrees in the liberal arts and sciences, business, and education. Applicants in the top third of their high school class are accepted; tuition is relatively low (\$57.50 per quarter in "fees"). Thirty to forty per cent of CSUH students are members of ethnic minorities.

CSUH is almost entirely a commuter campus. There is no on-campus housing, and only one University-approved, 300-student, commercial residence hall adjacent to the campus. While the campus Housing Office provides an informational card-file for students on housing available nearby, inexpensive apartments in Hayward are scarce. Thus, a March, 1976 housing survey<sup>1</sup> indicated that about a quarter (23%) of CSUH students regularly

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<sup>1</sup>Courtesy of Executive Dean William G. Vandenburg.

commute between three and ten miles to campus, while almost two-thirds (61%) travel over ten miles one-way from their homes. Because of today's high capital costs for construction, CSUH has no plans to build more student housing on-campus. Almost half of all CSUH students come from north of the campus (44% in one 1972 survey), from San Leandro, Oakland, Piedmont, Montclair, Alameda, Berkeley, Albany, El Cerrito, and Richmond--all communities which are connected to Hayward by BART's direct Richmond-Fremont line. Another one-fifth (19% in the 1972 survey) come from Fremont (also on the BART line), to the south, while a similar number (21%) commute from communities to the east, such as Walnut Creek, Moraga, Orinda, and Pleasant Hill.

The overwhelming majority of CSUH students (and of its faculty and staff as well) drive to the campus in their cars, alone. An April, 1972 survey by the campus Ecology Club indicated that 75% of the students and 85% of the faculty/staff typically commuted alone in a car, while 11% of the students and 8% of the faculty/staff rode in carpools. (BART had not yet begun its operation.) Only 4% of the 1972 student sample, and 3% of the faculty/staff sample, said they rode the bus to campus regularly. Other modes of travel (bicycles, hitch-hiking, and walking) were chosen in 1972 by 7% of the student sample and 3% of the faculty/staff sample.

In a 1976 survey by the Hayward Transportation Consortium, 84.1% of the students (and 89.1% of the faculty/staff) said they drive a car or ride in a carpool. The same 1976 survey indicated that 7.2% of students and 5.9% of faculty/staff ride a combination of BART and bus to the campus. (AC Transit's #91A bus originates at the downtown Hayward BART station Monday through Friday, every five to ten minutes during rush hours, making a 12-15 minute run directly to the CSUH campus.) In the 1976 samples, 3% of the students and 1% of the faculty/staff said they ride the bus to campus without involving BART. Bicycles, hitch-hiking, and walking were chosen in 1976 by 5% of the students and 2% of the faculty and staff.

If these data are representative, it would appear that BART has helped to produce a small decrease in overall auto travel to the CSUH campus (from 86% to 84% among students, and from 93% to 89% among faculty/staff), during the 1972-76 period. The total proportions riding BART and/or the bus in 1976 remain small, however (10.2% of the students, 6.9% of the faculty and staff), and automobiles remain the choice of better than four-fifths in both groups.

Thus it seems clear that CSUH is firmly committed for the foreseeable future to its present role as a commuter campus, and that its students, faculty and staff are the most highly car dependent of those at any college or university in the Bay Area, despite its enjoying excellent BART/bus connections with most East Bay communities. CSUH would thus seem to pose a clear challenge to those who would like to make an impact

on car use among college and university students--nearly 10,000 of whom now regularly drive autos several days per week to the Hayward campus. For this reason, some further discussion of car dependence at CSUH seems justified here.

One plausible reason for so many persons driving cars to Hayward is the excellent access to major highways which the city and campus enjoy. The Nimitz Freeway (State Highway 17) connects Hayward directly to communities as far north as Richmond, and to the San Jose metropolitan area on the south. Interstate Highway 580 runs north from Hayward through San Leandro, Oakland, and Berkeley, to connections with State Route 24 from Walnut Creek, Lafayette, and Orinda, and also east from Hayward through Dublin and Livermore. State Route 92 brings traffic to Hayward from West Bay communities across the San Mateo Bridge. Thus, auto commuters from all directions can count on first-rate, well-maintained highways for swift travel, and our interviews at the Hayward campus indicate the auto-driver's saving in time over public transit can be considerable. For example, one University official who regularly drives from his Fremont home stated he often can make the nine miles by car in 13 minutes total, pacing himself at 45-50 miles per hour, as against 12-15 minutes for the bus ride alone from the Hayward BART station. Travel from the north and west are more complicated, he indicated: Hayward has no through highways to connect those which feed into it, so 20 minutes' driving time on congested city streets may be necessary after a commuter leaves Highways 580, 17, or 92 en route to the CSUH campus. In fact, Hayward has for this reason sometimes been labelled as the single worst bottleneck in Northern California's highway system. Nonetheless, access to the city by superhighway must be thought to give strong support for car dependence among CSUH commuters.

A second factor, deemed important by CSUH's Dean of Students, is the "home/school/work triangle" travelled by large numbers of the University's students. A 1976 CSUH survey indicated that well over half (58%) of all students work full- or part-time, with almost a quarter (22%) working 30 hours or more per week. Thus, many students need their car not only to reach the campus for classes, but usually to go on after classes to their places of employment in neighboring communities, and from there to their homes. Using public transit for such a triangle, the Dean suggests, is inherently more difficult to structure conveniently and inexpensively than simple home-campus round trips. Hence the high proportion of employed CSUH students and the distances separating their homes, school, and jobs, may be important obstacles to their using BART and other public modes.

A third element in the CSUH picture which may support continued car dependence among its students and faculty/staff is its plentiful parking space. As one enters the plateau on which the 354-acre campus sits, one's first impression is of a modern tower-building surrounded by vast expanses of parking lots. The CSUH campus was built during a period of rapid

expansion in California State University enrollments, and it was planned to accommodate some 22,500 students--almost twice its present enrollment. During 1975-76, a period of greatly reduced college attendance growth, CSUH enrollment actually declined slightly, for the first time in this institution's history. The campus is overbuilt, in some ways, for the enrollments it can expect in the near future. One result is more than ample parking for those who wish to drive their cars to the campus--and a probable implicit incentive to auto use.

The car dependence at CSUH is not, however, for want of attention by student leaders and campus administrators to the encouragement of rapid transit alternatives. As early as 1964, the Trustees of the (then) California State Colleges expressed their interest in locating rapid transit as close as possible to the Hayward campus site. More recently, some CSUH officials indicate, there have been efforts to negotiate feeder-bus service from both Hayward stations to the campus, but the road grades from the South Hayward station (nearest the campus) have proved too steep for AC Transit buses to climb. Student leaders and campus officials have sponsored surveys in 1972 and 1976, as reported above, to obtain information on which campus housing and transportation policies could be based. It is University practice to include mention of BART and AC Transit in all informational brochures for students, as well as to run periodic messages concerning CSUH programs on the moving message screens in BART stations. With the exception of the student ridership on the single-purpose, #91A bus run to the campus from the downtown Hayward BART station, however, there is little evidence of tangible results from attempts at cooperation between University officials and transit authorities. To date, auto-oriented California State University, Hayward remains a largely unresolved challenge to the proponents of Bay Area rapid transit.

- o University of California, Berkeley

The University of California, Berkeley (UCB) is a century-old, world-renowned public institution offering bachelor's, master's, and doctoral degrees in the traditional arts and sciences, and in a range of professional fields. It is internationally known as a center of high quality research and graduate education, and of student and community political activity. More than one-third of its 27,500 students are in graduate programs, and large proportions are mature, married, and/or self-supporting. Admission requirements are relatively high for a public campus: Under the State's Master Plan for Higher Education, UCB accepts freshmen from the top one-eighth of high school graduating classes. Many students who complete two or more years at community colleges or California State University campuses transfer to UCB for more advanced work. Student fees total \$212-232 per quarter for California residents. Approximately one-quarter of UCB's students are members of ethnic minorities. More than one-half of the campus's students work full- or part-time, and about

one-half receive some form of financial aid through the University. A wide range of income-levels is represented on the campus.

The 1,200-acre campus itself stretches from urban, downtown Berkeley on the west to the Berkeley hills which overlook the East Bay; however, most academic buildings are massed on 200 acres near the western periphery. An intensive mixture of small commercial developments, low-rise apartment buildings, fraternity-sorority houses, and older homes forms the neighborhoods immediately to the south and north of the campus, providing nearby housing and shopping facilities for a large proportion of the University's student, faculty, and staff. While student car dependence is relatively low, traffic congestion in the entire Berkeley area is heavy, and parking facilities are scarce. Only a few parking spaces are open to students, and a relatively small number of faculty/staff spaces are provided on campus. Traffic problems are especially heavy at peak commuting hours, and on Saturdays during the football season, when thousands of additional autos often clog the streets and parking areas within several miles of the campus. Berkeley neighborhoods tend to be relatively active and well-organized politically, and the University has felt strong pressures from its neighborhoods and from the City Council over the past decade--first, to provide more parking spaces for its students and staff, and, more recently, to discourage auto travel to the campus altogether.

In part for these reasons, UCB administrators have been highly transit-conscious in recent years, and have embarked on the Bay Area's most ambitious effort by a college or university to shape its members' transportation activity towards less car dependence. In April, 1975, the UCB Chancellor announced a major Transportation and Traffic Project, "aimed at making public transit the main means of access to the University in order to conserve energy and enhance the environment." "Mass transit, not the auto, is the shape of the future for the campus," the Chancellor's news release stated at that time. Headed by a former chairperson of the Berkeley Planning Commission, the Project was designed to gather better data on transportation and housing patterns affecting the campus, and to create a many-pronged attack on the car dependence of UCB commuters. Already, during 1975, the campus administration had cancelled the construction of two new parking structures for the campus, and had cooperated with the Associated Students and the City of Berkeley in setting up a cross-campus shuttle bus, the "Humphrey Go-BART," which connects main campus areas with the downtown Berkeley BART station, less than two blocks from the western campus edge.

In addition, the Statewide Administration of the University of California has long collected data on student housing patterns, commuting distances, and modes of transportation at its nine campuses, by means of questionnaires in student registration packets. A 1974 report of these data (Fink, 1974) indicated that UCB should be classified (with its U.C. San Francisco sister institution) as a "pedestrian-oriented" campus. In

1971-72, the report indicated that almost half (49%) of UCB's students walked to campus, while only about one-fourth either drove a car to campus (20%), rode as an auto passenger (3%), or rode in a carpool (1%). In that year, eight per cent rode public transit (AC Transit buses), 12 per cent bicycled to campus, five per cent indicated they hitch-hiked, and two per cent rode a motorcycle or scooter. Thus, despite its traffic and parking problems, the UCB campus by 1971-72 already had the lowest proportion of auto-commuting by students of any institution for which data have been discovered in this sub-study. The report ascribed these results to several factors: First, it was inconvenient for students to drive, because of traffic congestion, lack of parking spaces on campus, and heavy competition for parking spaces in neighborhoods near the campus. Second, a high proportion of students (59%) lived on or within one mile of the campus; almost three-quarters (74%) lived within two miles. Third, the density of the area near the campus, the clustering of most academic buildings close together, the existence of more than 20 pedestrian access points to the campus, and the attractiveness of the campus itself all combine to make walking an attractive alternative for students.

A doubling in the percentage of students bicycling to campus, from six per cent to 12% over the 1965-1972 period, was ascribed to "an increased ecological awareness among students, a desire to exercise while traveling to campus, and the establishment by the City of Berkeley of bicycle lanes on streets adjacent to the Berkeley campus" (Fink, 1974, p. 83). A 1965-72 trend toward students' living farther from campus (probably due in part to Berkeley's high rents) was credited with producing a slight increase in student auto use by the latter date, since only one-tenth of the students living within two miles of the campus drove their cars in 1971-72, while six out of ten who lived three or more miles from campus did so.

In Winter, 1976, the UC survey for the first time distinguished BART ridership from ridership on AC Transit's buses, the other form of public transit which serves the UCB campus. Comparison of these data with those collected in 1970 indicate that BART ridership has helped to produce a reduction in auto commuting to the UCB campus, especially from longer distances.<sup>1</sup> This comparison, by the University's Statewide Administration, indicates that, since 1970, BART use has increased from zero to eight per cent (8%) of UCB students, while auto driving has decreased from 20% to 15% of the student population over the same period. Evidence that BART has helped in the reduction of auto use is found in the proportions of increase and decrease at different commuting distances. Thus, among those commuting six to 10 miles, BART use has increased by 20% (from

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<sup>1</sup>Courtesy of Michael Fajans, Office of the Assistant Vice President for Physical Planning, Construction, and Operations.

zero), AC Transit use has decreased by 6%, and auto driving has decreased by 31%. Thus, it would appear that BART ridership, while still less than a tenth (8%) of UCB students' travel, has helped measurably in reducing car dependence among UCB commuters by providing a desirable alternative for reaching the Berkeley campus from long distances. Because of the probability that increasing proportions of UCB students must commute to campus, rather than live in its already congested environs, it seems likely that BART's impact on this campus will continue to grow in the foreseeable future.

In summary, the University of California, Berkeley is the one clear example of a strong BART impact on a Bay Area campus which can be documented by this sub-study. The Statewide and UCB campus administrations appear to have taken reduction of auto use and the encouragement of public transit use quite seriously. Berkeley's mounting of an ambitious and well-staffed study/action project to implement its pro-transit policies is a promising omen for the future. Systematic data have been and are being gathered and analyzed to determine rational bases for campus transportation policies. And specific administrative action, such as the restriction of parking spaces and the encouragement of the Humphrey Go-BART shuttle, would appear to be deliberate attempts to put established transit priorities of the campus into practice.

In addition, of course, the campus begins with substantial advantages in location in the urban and academic scenes. The existence of much student housing near the campus allows about half of the students to walk to classes and makes any reduction in auto use proportionally greater in its effect on the overall campus environment. By contrast, the academic prestige of the University makes it a campus to which many students may be willing to commute long distances, at which BART use appears to be most attractive. Finally, it may be that many of the students most attracted to the University also are likely to place a value on BART's characteristics as a transit mode. These are the academic high achievers, the aspirants to structured knowledge and professional status in their society--whatever their families' incomes and ethnicities. As we shall see in a later section, the styles of life to which such students would appear to aspire are supported by BART's major characteristics as a mode of public transit.

#### B. THE IMPACT OF BART ON THE LIFE STYLES OF BAY AREA COLLEGE AND UNIVERSITY STUDENTS

Let us now turn from a focus on individual institutions of higher education to the consideration of BART's impact on the life styles of students at a cross-section of these institutions, as revealed in exploratory interviews with 78 students over a period of about six months.

These students' responses made it clear that no simple conception of "impact" describes BART's influence in their lives. As noted earlier, students approach such events as a mass transit system, not as passive reactors, but as actors seeking to guide their own destinies, and to use the transit system for their own purposes. (Blumer, 1969) Those purposes arise in their lives as they were being lived before the transit system entered their purview, and the relation of system and life styles is much more of an interaction than it is an example of unidirectional cause and effect. This is especially so for most of the effects which can be determined or inferred from limited observations and structured interviews in an exploratory study such as this one.

#### Meanings of Life Style Employed in The Sub-Study

The ILS research is designed to inform public officials and citizens as decision-makers about the future of mass transit in this country, by enriching their knowledge of what differences the BART system is making in human lives and institutions of the area it serves.

It was recognized early in the study that neither "impact" nor "life styles" is a concept with much depth or background in applied research by social scientists. Impact is a concept which comes to us from the physical sciences; its language of physics and momentum does not correspond to the interwoven systems of causality in the social realm. Life style as a concept has precursors in the early history of modern social science (Gerth and Mills, 1958:187ff.), and has been used with a variety of meanings by some modern researchers. (See Michelson and Reed, 1970, for a summary.) However, it is primarily a term which has currency from the popular culture and journalistic accounts of the 1960's, when value differences among generational groups came strongly to public awareness. Despite the limitations in the terminology of "life styles" and "impact" for the study of social meanings in transportation development, there is a strong need for research and theory development on the meaning of new rail rapid transit in the social world. Our research aims to provide insight into these meanings in terms of beliefs, behavior, images, and experiences of BART as a new form of transit.

Our application of the term, "life style," follows the usage explicated recently by Zablocki and Kanter (1976), considering life style as an autonomous variable, intervening frequently between such structural variables as age, ethnicity, class position, or environmental setting and the behavior and attitudes of persons and groups. Life style is indicated mainly by patterns of shared meanings and preferences involved in the spending of resources; that is, by consumption patterns, broadly understood. Life styles are seen as shared by collectivities which do not necessarily have strong social or cultural cohesion of other kinds. For example, the collectivity chosen here, that of "Bay Area college and university students," may be said to share some elements of consumption

preferences, stemming from their engagement in the tasks of academic study, and from similarities of age and class position. However, the group also includes much diversity in age, marital status, place of residence and home life, institution attended, personal goals, etc.--which makes them a relatively loose and heterogeneous collectivity for study. At the same time, lifestyle collectivities are not expected to be self-consciously such; that is, the members may not identify themselves importantly as "college students" in the way, for example, that members of a social movement tend to identify themselves ("I am a feminist"). In the case of college students, as with other loose "publics" of its kind, there tends to be some personal identification with the student status, but a general disinclination to label oneself with that rubric in describing one's affiliations, identity, or style of life.

As implied above, life style here is understood to cut across the usual social class and social status groupings, although it may often be highly correlated with them. For example, with Zablocki and Kanter, we find useful the concept of "occupation-dominated" life styles, characteristic of middle-class and upper-working-class persons whose lives are "shaped in large part by the selling of labor for wages on the market" (p. 274)--as distinguished from the "property-dominated" life styles of economically secure upper-class persons, and the "poverty-dominated" life styles of lower-class persons. Our interviewees, like the vast majority of U.S. college and university students, come from families whose life styles are "occupation-dominated" in this sense. Moreover, the student status itself may be usefully seen as involving an "occupation" with typical, recurrent tasks, supervision, promotions, vacations, and "pay" (in the form of grades and degrees)--patterns of demands and freedoms which shape students' behaviors, attitudes, and life styles in much the same ways that explicit work for wages does. Specific examples of such shaping, by particular features of the student's "occupation," are discussed in later sections, along with the data relevant to them. However, one or two examples may be discussed here briefly, to clarify later discussions.

Most college and university students must maintain (and manage with some effort) a tension between "work" and "play" (or pleasure) which is exacerbated by systematic features of the student status. Classes are held at professorial and institutional convenience, and students must meet professors' demands to study and demonstrate their learning in courses. However, classes do not occupy the whole week for most students, and the individual is free to schedule his or her study and writing for those classes in whatever sequence she/he chooses, within wide limits. A continuum of variations on this pattern may be typified: At one extreme, a university medical student may find himself assigned more classes and reading assignments than he can possibly handle every week, so that his problem is how to find any free time at all for family life with his wife and child. The senior majoring in English at a California State University

campus may wrestle with her advanced course-work and the research for a senior thesis, while she also holds a half-time job as a teaching assistant in lower-division courses, learns to "consume" the arts, and spends weekends with her boyfriend, considering whether they should start living together or continue in separate apartments. The community college freshman, still living with his parents or with roommates in his first separate apartment, may find himself attending large, impersonal classes without studying for them beforehand, reading for examinations at the last minute, and writing term papers when he has to--meanwhile feeling vaguely guilty about this pattern most of the time. All of these students share the need to manage free time (often with little previous practice at this), and to meet stringent demands for work-production within periodic (six-weekly or three-monthly) deadlines. This continuing tension may, as we shall see later, throw light on many students' strong concern with the scheduling of time by mass-transit systems. By contrast, younger youths may have the frequent task of "killing time" after school, and may do this in part by shopping via BART at the El Cerrito Plaza, while non-student housewives may find their life styles shaped by the rhythms of housekeeping, transporting and supervising children, and shopping for their families' needs. When these housewives return to college, however, as some of our interviewees indicated, their scheduling problems become more acute, and their concern for precise schedule information from a mass-transit system becomes a more salient part of their lives.

At the same time, the relative comfort and cleanliness in which most middle class and upper working class families raise their children today may produce an articulated interest among college and university students in maintaining contact exclusively with a clean, comfortable environment--and a sharp distaste for the hustle and bustle of mass urban transit systems which makes this impossible. Hence, we suggest, the striking frequency with which our informants made favorable comments about BART's comfort and cleanliness, contrasting them with "hot and smelly" buses and streetcars, or with New York City subways, on which people in general are seen to be "either rude, or smoking."

These are examples of shared consumer preference patterns which may be expected to be common to college and university students generally (though not exclusively),<sup>1</sup> by virtue of their sharing a general income

<sup>1</sup>No attempt is made here to distinguish ways in which students are concerned with BART but other persons are not. Our interest in this section is focussed on the question: To the degree that BART affects students' lives, in what ways does it do so? Features of student life, such as concerns with time-scheduling, with personal autonomy, and with the future, were chosen not because they concern only students but because they are typical of persons in the student status, and may therefore be expected to have some applicability to other members of the collectivity being studied.

level and the characteristic task demands of student status. These and other patterns are discussed below in relation to particular types of response in our student interviews, and to findings about BART's place in the lives of particular Bay Area campuses.

o Commuting, Residence, And Home Lives

University and college students fall largely, as we have suggested, into "occupation-dominated" life styles with certain special qualities because of their special occupation: going to "college." However, students who ride BART are almost always in one sub-group of college students: those who commute to their campuses from homes some distance away. This means that their home (and, typically, their other work) lives are separated physically and socially from their lives on the campus. In Kanter and Zablocki's terms, their work is thus likely to be much less "absorptive"--less broadly and totally involving of them and their associations in the other parts of their lives. It has been shown (Chickering, 1974, and references cited) that commuters to college differ from on-campus resident students in a number of ways. For example, as compared with dormitory residents, students who live with their parents tend to take part in campus activities less, and listen to music less; but they tend to go to church more, to discuss with friends more often how to make money, and are more likely to drive a car. They are, in general, deprived of the intensity of "campus life" experienced by students who live on the campus, and they tend to change less in their attitudes and personal development during their college years.

Commuting to campus has grown rapidly at U.S. colleges in the 1970's, as regional institutions have curtailed dormitory building plans under the pressure of high capital costs, and as the largest enrollment increases have occurred at community colleges which are relatively near to the residence communities of their potential students. Smaller and smaller percentages of students "go away to college." Ridership on BART to the degree that it has any impact on students, appears clearly to support this trend, and the consequent separation of students' home and campus lives, by providing one new and relatively comfortable way for commuters to travel to (or near to) many Bay Area campuses. In the words of one student at Diablo Valley College:

Commuting to school is not the ideal situation, but  
BART makes it liveable and even pleasant.

Residence and Home Life Patterns

The range of home and family lives which BART ridership supports is extremely varied. For some students, the setting is a satisfying but confining family home -- as reported by one interviewee, a Mexican-American 19 year old who lives in Fruitvale:

I am very family oriented. All my brothers and sisters live at home, and we all get along well. We do things as a group. There are other families like ours in the neighborhood, and sometimes the families have picnics together. Sometimes I think I would like to live away from home, but this would mean getting a job, and I am not sure I can work and go to school at the same time. Most of my girlfriends are in the same position. But mostly I am a happy person. My grandmother goes shopping on BART, and sometimes I go with her. She thinks riding BART is a lot of fun--she enjoys it immensely. It's one of the important things we do together. My grandmother is old and can't walk too much, so BART is really a help. I like going out with her; it really gives her some fun. If I don't go places with her, she doesn't get out much. I took her to school once on BART and gave her a tour of the campus. She was very impressed, and wants to go back again.

Implicit here is the continuation of parental control over their college-age children's lives--an important issue which most young people of this age must find some way to handle. The control was explicit in some students' reports. According to an 18 year old DVC freshman, daughter of a physician, who lives in Lafayette:

I live at home with my parents because they don't think I'm old enough to leave home. I wanted to move to San Francisco and go to (San Francisco State University), but they wanted me to go to DVC first. BART fits in with where I live and where I go to school, but it's not convenient for where I work. My parents like me to ride BART because it's safe.

An 18 year old San Francisco man, in his first year at CCSF, told a somewhat similar story:

Since I don't have a car, I have to live at home and ride BART. I guess it ties in with where I live, because it's the only way I have to get away from and back to home. When I can afford a car, I'll move out... My family says I ride BART too much. But they really mean that I don't stay at home enough.

Illustrating the transitions which age and experience bring in this area, a new graduate student at Berkeley recalled her undergraduate years:

I used to go to Hayward, and then I used BART every day from my family's home out in Diablo Valley. It took so much time for me to get from home to the BART station that a lot of the times I ended up hitch-hiking. Later on, I went to U.C. Extension at night. I rode BART there, but then, because it would be so late when class was over, I would have to hitch-hike home. My family got so upset about my doing that, that they used to make my brother drive all the way to Berkeley at night to take me home after Extension classes. Now I live in Berkeley, and walk to school.

For one SFSU senior, BART is an aid to living where he wants, independent of his parents.

Part of it for me has been that I no longer live near school. I've moved to the East Bay--I used to live near San Francisco State. Now I'm not a part of the student community.

Another male student told a similar story: He had lived in Hayward with his parents, but now lives in Berkeley with friends, and commutes via BART to CSU-Hayward--apparently preferring the autonomy and student life of the Berkeley community to the convenience of living with his parents near the campus at which he is enrolled. Another interviewee, enrolled at U.C. Berkeley, said he lives with three friends in Albany, and all four commute daily to the Berkeley campus.

Besides these familiar patterns of students living with their parents and then establishing their autonomous lives, BART also is part of newer styles of student life, involving married couples with children, and "two career families" (Kanter/Zablocki, 1976: 277). A 33 year old, pré-nursing student at Laney College rides BART directly from her North Berkeley home to the campus; her husband uses the family car ("when it's working") for his work:

I ride BART to school five days a week. I live close to the BART station. My mom rides it to work (in the East Bay), and my uncle rides it to his work in San Francisco. Also, my sister rides it to Hayward State! We all go at different times to different places, so we don't ride it together. But I'm always running into some member of the family coming out of the BART station on the way home.

My mom likes it the best. She says that before BART, she didn't know what she would do to keep the family together. Maybe that's a bit overstated, but BART means a lot to our family. We also use it to the Coliseum, the Museum, and the swimming pool. It's a lot less tiring than the bus.

Almost as involved with BART was a male Berkeley graduate student:

When BART started, we felt we could move out of Berkeley. We found a real nice place near a BART station in Oakland. It's still really convenient although it did cost some. But we got a much bigger and quieter home, and rents get cheaper every mile you move out of Berkeley.

My wife and I commute to Berkeley on BART together. We drop off our daughter at the nursery school on our way to BART. And we find time when we're on BART to discuss a lot of family matters, tie up the ends of things we haven't done...

#### Work and Study While Riding BART

As these accounts indicate, a considerable variety of home lives is supported by BART as a campus-commuter vehicle. Many students also mentioned making specific use of the time spent on BART in study or other preparation.

However, students vary widely in their assessment of BART's suitability for studying. Here are examples:

I do a lot of reading on BART. I spend a lot of time on it (30 minutes each way) and I would be stupid not to get part of my studying done then.

I do some homework in the station while waiting for trains, but my ride is very short (30 minutes each way), and I really don't study much on the trains.

I used to live in Richmond, and then I drove to BART, which I took to Oakland where I worked. I used to do computer programming while I was riding BART... Now I live in San Francisco and go to the University, and I sometimes drive, sometimes take BART. But the MacArthur transfer keeps deterring me. Also I find I worry a lot, when I'm on BART, about missing stops. When you're driving, you're

driving, you're responsible, so you pay attention, but when you're on BART you can't quite relax, because you have to pay attention or you'll miss your stop.

I am able to do some homework, reading on BART, if the trains are not too crowded. But you have to take care not to get too absorbed in a book, or else you might miss your station.

I could never study on BART. It would make me feel nauseated... All kinds of public transportation make me irritable.

A number of interviewees indicated the BART ride is a hiatus, an interim for thought.

I don't think I could study very effectively on BART, because it makes me slightly ill a lot of the time. Almost all transportation does. I don't spend a very long time on it at once, so I just try to relax, and think about what I have to do during the day at school.

I use my time on BART to daydream or read. And to relax and prepare for what is ahead of me.

BART is a good place to do homework. Mostly, though, it just puts a lag between things I do.

No, I don't do any homework on BART, although I notice other people studying... BART takes just the right amount of time (20-30 minutes each way), not too long or too short. I'm not eager, in the morning, to get to school or work, and BART is sort of a "time out," a rest.

Some students' specific schedules make studying on BART impossible:

No, I don't do any work on BART. It's usually too crowded for that. In the afternoons, I take classes and I'm a teaching assistant, so I have to be on campus late. And that's when BART really slows down, during rush hour.

And the contrast of work and play, another theme with which most college students have to wrestle regularly, emerged in some reports:

I don't do any homework or writing on BART. Just some "escape reading," sometimes.

Not any work. Just my pleasure reading.

#### Assessment of The Commuter Life

These accounts indicate some of the purposes served by BART in a variety of commuter students' life style, and the appreciation many of them feel for its availability. Our interviews revealed the other side of this picture also: When commuting and commuter college culture are disliked by students, BART gets part of the credit for that, also. Here is a 27 year old Caucasian woman, who lives in Berkeley and majors in Arts at San Francisco State University:

I wish travelling on BART were faster. As it is now, I have no extra time to hang around on campus. I feel like I am almost a stranger to the campus, because I have to budget so much time to travel. I feel like a commuter, strung out between Berkeley and San Francisco, with no time to enjoy the in-between places.

A Chicano man, attending CSU-Hayward:

I chose Hayward because it has a good history program. I like the campus, and the fact that I can take BART there is an asset. But I haven't met many people there, because most of them don't linger after classes--they all rush off to work. The lack of contact with people doesn't fit in with my dream of what college should be like. It would be nice if I could meet some people who live in my area and also go to CSUM. Then we could travel together, and maybe meet socially too.

A 19 year old engineering major at Diablo Valley College:

I came to DVC because it's good in my particular field. But it doesn't feel like a college to me now. It doesn't have any cohesiveness, any college spirit, or student participation in school activities. We all come, go to classes, then leave.

A 24 year old Caucasian woman who attends Laney College:

I went there because it's not very expensive and has the kind of program I want. BART goes right there and that's a help... but I think BART has

changed the school into more of a commuter college than it was before BART opened. That's good in some ways, because it means that more people can go to school there. But it's also bad, because Laney doesn't have as much a flavor of a community school as it once had.

A Chicano man who commutes from San Francisco's Mission District to Hayward:

I'm only here this term because of a program they have that San Francisco State doesn't have... I don't think too highly of the student life here. I haven't made many friends here, and there aren't many student groups that interest me. I find the commuter atmosphere depressing...

o Community And Isolation Among BART's Student Commuters

We have seen that BART supports a variety of residence and home-life patterns for those Bay Area students--allowing them to live at home with parents, in singles' apartments, in shared houses of their own choosing, or in new family homes at a distance from the campuses they attend. Some put the time on BART to use in study or other work; others see that time as a special interim in their day - rushed or relaxing - depending on when and where they ride. But what of their associations on BART, their interactions with others?

This issue is important because of many students' concerns during the past decade about the impersonality of the institutions they attend. It is also important because of broader sociological concerns for the loss of community in a "mass" society segmented into many occupations and special interests, and united increasingly by a thin, homogeneous, "mass" culture largely conveyed through the mass media. It is of particular interest because patterns of shared commuter culture have developed in other transit situations: regular bridge and poker games among New York executives on the New Haven and Hartford, friendship and rivalry patterns among children on school buses, and the political/religious debates through which suburb-to-city carpools keep their members awake.

We shall see later that BART impresses most of our student interviewees as cleaner, more comfortable, lighter, and generally more pleasant than the buses and streetcars with which they compare it. The strong preponderance of evidence, however, is that BART is in no sense a community experience; instead, it appears to be isolating for most of its student riders.

On the basis of our interviews, most students who ride BART do it by themselves: Of 38 students from eight campuses who were contacted in second-stage interviews, 82% indicated they always or usually travel alone. (Some unintentional bias in selecting respondents may be operating here, since single riders may be more likely to agree to interviews than those in groups. However, observation by researchers, and most of the interviewees' comments about others around them, support the same conclusion.) By contrast, a number of observers have noted the presence on BART of groups of younger youths--both organized, institutional groups from elementary schools, and informal clusters of pre-teen or early-teen youngsters. For most university and college students, BART ridership has few such group aspects, and conversations among college age riders also appear to be comparatively rare. The occasional, laughing cluster of Chinese-American students seen leaving Balboa Park station near the City College of San Francisco, and the cheerfully conversational pairs of young men and women leaving Berkeley on BART, stand out out by their atypicality. Among our interviewees, there were variations in perception on these matters, but only one of the 78 students interviewed indicated she rides BART regularly with friends, or reported knowing of others' doing so, or indicated that significant new acquaintanceships have grown among regular BART riders. Here are some of the interview responses on this issue:

BART is very modern and pleasant, but it is also isolated and isolating. (17 year old woman living in Lafayette, attending DVC)

It's an isolated experience. But then, I'm an isolated man. (32 year old man living in Oakland, attending Laney College)

BART is not a community experience; it is very isolated. People are into their books and newspapers, and not into relating with other people on the trains. I feel as if I'm going into a cocoon when I get on the train. (26 year old woman living in Berkeley, attending Merritt College)

I don't know anyone who rides BART. I study in the stations and don't talk to anyone. I don't know anyone else's opinions about it. (28 year old woman living in San Francisco, attending City College of San Francisco)

I think some people ride BART on Fridays and Mondays for the same reason that I do, because I see some people every week. I have a nodding acquaintance

with a few of them. This is reassuring to me in a funny way; I don't feel like an awkward stranger on BART anymore... I feel safe on BART most of the time, but I have learned not to ride near the back. A few times, groups of teenagers have gotten on back there and hassled people. I think the BART trains should have conductors who walk back and forth on the length of the train to guard against anyone harassing anyone else, because most passengers are either too passive or frightened to help anyone in trouble... A lot of the people I see on BART act as if they are not on it. They look like they are pretending they are somewhere else, and not sharing public transport with anyone. (30 year old Berkeley woman, attending Laney College)

I don't know anyone who uses BART. But I see a lot of DVC kids who use it. I suppose they like it. They ride it, after all. (18 year old male Oakland resident, attending Diablo Valley College)

Not all of our respondents said they found BART isolating. A 49 year old Chicano man, recently moved from Martinez to Lafayette and attending Diablo Valley College, said:

I find it very relaxing and very enjoyable. Yes, it's a nice communal experience. It's all in your attitude. If you're going to hate something, then you will hate it.

Others, while feeling the isolation, remain hopeful. A 24 year old, "very Irish" man, a Berkeley resident attending Laney College, said:

The only aspect of BART which I find unpleasant is the fact that I ride it alone. I wish I had someone to talk to. But, who knows? Maybe I will meet someone.

Most of the time, BART feels isolated to me, but once in a while, when I give people directions, it feels like a community experience.

Finally, a number of students say they find the isolation an advantage. In the words of a 25 year old, Anglo-Filipino woman who lives in San Francisco and attends City College there:

I'd say BART is isolating, but that's an asset to me... I try to read when I'm riding, and don't pay any attention to anyone else... As soon as you make eye contact with someone, it's hard to stop looking at them, and that sooner or later will give you trouble. San Francisco is full of strange, bizarre people that I just don't want to talk to, or have staring at me.

In short, BART ridership appears to enhance those aspects of student commuters' lives which are separate, individualistic, orderly, and businesslike. BART is "safe, clean, and comfortable," as one student puts its--in some ways, an island in the rushed and bustling life of a metropolitan region. For the student commuter, it is a functional and largely impersonal link in the serious business of going to college.

o BART's Impact on Car Dependence Among College Students

As our research on BART ridership at colleges and universities progressed, it became clear that BART's potential impact on students' life styles is greatly reduced by the heavy dependence on automobile travel which forms an important part of so many students' lives. For example, BART ridership ranges from 7% to 16% among students at the Bay Area's campuses studied, while car use ranges from 24% to 84% where figures are available. The University of California at Berkeley's major Transportation and Traffic Project has taken as its prime target the promotion of public transit over the use of private autos. The Project recognizes that a many pronged attack on auto use is necessary, and that no one approach (reduction of parking facilities, advertisement of transit, easing of access to transit modes, etc.) can hope for much success. The Project cites an increase in car use in Berkeley during the period from 1960 to 1970--in numbers of automobiles, of households owning autos, and of vehicle trips made. Other campuses which have approached this issue tend to see little hope of major reductions in car use by their students in the foreseeable future.

A thorough study of car dependence in college student culture was beyond the time and resources available to this sub-study. To fully understand BART's impact on students' lives, however, it became necessary to gather some information on the place and meaning of cars in the lives of the students interviewed, and on their views of whether cars might some day be replaced for many students like them.

Automobiles, and the self-directed mobility which they help to make possible, are deeply embedded in American culture generally. As the film American Graffiti illustrated, cars and their attendant meanings can form core elements in whole segments of some young peoples' growing up. For many young people, learning to drive a car and gaining control

of a car for their own use are major steps in the process of developing personal autonomy, which occupies much of their emotional energies during the high school and college years. By college age, most students are of an age and have the personal skills necessary to drive an auto legally and competently; most are considered by their parents to be competent and entitled to use a car if one is available. Thus, it is not surprising that car use is the most common form of travel to and from Bay Area college campuses, as it is in American life generally.

What impact has BART's availability had on students' car dependence? Our exploratory interviews, like the statistical data available, indicate that the impact has been only a modest one. As we shall see, there is some hope for the future. First, however, let us look at the meanings which cars appear to have for the Bay Area students whom we interviewed.

#### What Cars Mean to College Students

When questioned about the place and meaning of cars in their lives, some of our respondents denied any but a simple, utilitarian function:

A car means getting places, that's all.

I'd like to have a car for the freedom--to be able to go where I want, when I want. That's basically what a car means to me. I think BART has cut into car use and that's good, but I don't think cars should be outlawed.

A car is just a tool. I use it to get somewhere.

For others, a car serves explicitly social functions. As one woman undergraduate at Berkeley put it:

I usually use a car pool from Hayward to Berkeley during the regular term. Once a week or so, my schedule is such that I have to take BART. I like the car pool better. It's a problem, telephoning each other, and all that, but it is door-to-door service, and it's cheaper. I've met some new friends that way, too, and that's nice because I feel a bit lost in such a huge University... Basically, my life style is centered around living in Hayward with my family, going to school, and meeting with my Hayward friends--most of whom I know from the car pool.

For some students, the car symbolizes "freedom."

A car means total freedom to me. It has always meant that. I feel trapped without a car. This is especially true at night. There have been a number of rapes and robberies in our area, so if I don't have a car, I can't go anywhere out of fear. Also, I do have two children and I need a car for emergencies...

What does a car mean? Freedom! Transportation! Payments! Getting where I want to go!

For a substantial number, however, "freedom" appeared less important than the theme of personal convenience, which emerged also in many comparisons of BART with bus/streetcar alternatives:

My friends and I never bother with the (public transit) system. We all prefer to drive our own cars. I drive alone, and I can come and go any time I want... The advantage of driving to Mills is that parking is real easy there. You just drive in anyplace.

I'd like to have a car for the convenience--to be able to go where I want, and when I want. That's basically what a car means to me.

A car means getting to where I want to be, when I want to be there.

A car means door-to-door service to me. It means mobility, and no waiting.

The theme of isolated individualism also reappeared in a few interviews:

I plan to buy a car soon. A car means direct travel, not having to wait for anybody or anything...

I know that cars are destructive to the environment, but I don't think just my having or not having a car makes much difference. My being relaxed, by avoiding things like buses or BART, is more important than my concern over ecology right now. I know this sounds pretty harsh, but I've got to take care of myself before I take care of anyone else.

In related comments, a number of students seemed to indicate they consider that such convenience in most Americans' lives must now be considered a necessity:

There shouldn't be any policy of having fewer cars. It would just mean trouble. People need their cars. It's like food, a necessity.

I'd like to see cars eliminated, but that's not realistic.

It's not realistic to expect fewer cars. Not now, anyway. Maybe in ten years BART will be able to replace cars.

Getting rid of cars would be great, as long as I can still go where I want to go.

I think fewer cars would be fine. Just so I can get where I want as fast as I can by car.

Besides these general statements, some respondents indicated the firm place which cars have in the "necessities" of their daily lives:

We have a car, but my husband has to use it for his work.

For this student, it was clear that her husband's work-related need was primary in considering their transportation priorities; her own "school" travel, being secondary, could be adjusted to fit the available public transportation. Several other respondents mentioned recreation as a necessity which makes car ownership important--even though they ride BART to school and back.

I feel that people should have transport for work and shopping, but they need cars to get out of the city and into the country to relax... If I had a car available, I emphatically wouldn't ride BART (to school, either).

I have a car which I use weekends to visit my friends, get groceries, or sometimes see shows. But if BART ran weekends, I'd love to use it to go to the City. It would sure beat the hassle of parking.

People should have the freedom to have cars for pleasure trips, maybe, and have BART and Muni for everything else.

Other respondents described less utilitarian "attachment" to cars. A 33 year old mother said:

I would like to have my own car. My own social life as a young person really started when I first learned to drive, and I haven't quite weaned myself from a certain sentimental attachment to them. I completely rebuilt the engine, once, in our family car, so I feel extra attached to it.

An 18 year old freshman at City College of San Francisco said:

My friends and I don't discuss BART much. We talk about girls and cars.

Another CCSF freshman, a 28 year old married woman, said:

My husband has a car, and I would use it, except that parking's a bother. A car's meaning? That's a funny question... A car isn't like a religion to me, although it seems like some people worship their cars. Like teenagers, and Porsche drivers.

Such comments suggest the richness of imagery, associations, and hopes that many people--especially young people, with limited opportunities of other kinds--may attach to their cars in American student cultures.

Negative associations with cars proved to be almost as rich a source of images and convictions. A 28 year old Chicano man, attending CCSF, responded:

Yes, I have a car, but it's not running. I don't have the money for a new engine. It's a burden to own a car, especially in the City. The parking problems are atrocious; they couldn't be any worse. Rat race is the only phrase to describe using a car here.

Others said:

I have a car, but I use it as little as possible. I don't enjoy driving, parking, or paying exorbitant gas prices. A car just means trouble and worry to me. To be blunt, it is a pain in the ass.

I love BART. I grew up in New York City, and always used public transportation there. I bought my first car when I moved to California. It was an expensive lemon... I sold it. I'd much rather have someone drive me when BART isn't running.

Some students seemed to find car ownership a kind of financial treadmill:

A car means money to me--having it and having to spend it.

Cars are seductive. They offer freedom of movement, but they tie up our bank books.

For one San Francisco resident, recently moved from Marin, living in the City had changed his feelings about cars:

Cars are usually a status trip, but in San Francisco they're too much trouble to be a pride thing.

Following a similar theme, one student made a prediction:

Fewer cars as a policy would be okay, but a new security blanket for people will have to be found... People love their cars more than they love other people. It becomes an extension of their lives. People feel naked and helpless without a car. So, people will have to "love and cherish" BART, for example, before they will give up their cars.

Together with these negative meanings which cars may have, some students expressed a sense of guilt which car ownership can foster. One student volunteered, for example, that:

A car is a temptation to go out and not study.

Another said:

You can really manage your life better, and study more when you are in school, if you don't have a car. But I know I'd love to have one, if I could afford it...

Guilt about the work/play nexus is an issue with which most college students have to contend in some way. In the current era, another question which elicits some guilt and ambivalence toward automobiles is pollution of the environment. Here are illustrative comments reflecting this reaction:

I feel very guilty about using a car, because I drive alone and not in a car pool, so I feel that I add more than my share to the air pollution. I would use BART as my only transportation, I think, if it weren't so expensive.

I sort of like to see lots of people on BART;  
it means fewer people are out driving cars.  
Although I do drive sometimes, myself.

I don't drive a car, but I ride my motorcycle...  
During commuting hours on BART, I see a lot of  
executives, and I feel great about that, because  
it means more cars are off the road...

In summary, our interviews suggest that automobiles and their use are deeply entwined in the lives of Bay Area University and college students--including most of those who ride BART regularly--and that BART's availability is making a small but genuine impact on car use. BART's allies in this are the expense of car use, the parking "hassle" in urban areas, the unpleasantness of driving in traffic, and (to some extent) students' desires to help reduce air pollution. However, in many cases, students appear quite open about their ambivalence where cars are concerned. They do not like many things about cars, but they are wedded to the "convenience" patterns of their lives, in which auto use plays such an important functional and symbolic part. However, another pattern emerges from our interviews which may point the way to greater BART impact over the long run.

#### BART's Attractiveness as an "Afterthought"

We were repeatedly impressed, during the conduct of this sub-study, with the lack of interest in BART shown by many interviewees. Despite its public visibility over the period of a decade, many university and college students seemed not to be aware of it as a real transit alternative for themselves. Even some of its regular riders indicated a blasé acceptance of BART as simply one more part of the urban scene in which they live.

As one young San Francisco woman puts it:

BART is not something I get excited about. It's  
something I take for granted.

A young man who lives in Lafayette expressed a similar sentiment:

Except for the first time on BART, which was a change  
for me, riding on it is something I forget about as  
soon as the ride ends. I think that's a good indica-  
tion of how well BART functions, though. If it were  
a mess, I'd probably think about it a lot.

The importance here of such disinterest is the clue it may give us to BART's place in many students' lives. If it is adequate transportation for them, it is treated as a means to an end, and little more. BART

and, apparently, other forms of public transit--unless they are irritants--have a "low profile" in these students' lives.

Comments from a number of interviewees suggested that BART may also have a low profile among many non-BART riders, who could make use of it but don't. These comments, from persons now riding BART, described their lack of awareness of the system before some chance event had led them to discover its potential. For example, one young woman, whose auto had turned out to be a "lemon," said:

Recently I sold the car, and not because I needed the money. I just found I could take BART or the bus where I want to go.

A Mission District resident, who attends CSU-Hayward, elaborated a similar theme:

I don't have a car. I did have one, but it broke down, and I couldn't afford to get it fixed, or buy another one. Travelling is a little harder now without the car, but I don't have to bother with paying for gas, or finding an open gas station, or fixing it when it breaks down. A car used to mean mobility to me, but now that I've been forced to do without it, it has lost that meaning... If you really want to get somewhere, and you aren't physically disabled, you can do it without a car.

A Berkeley graduate student, living near the UCB Campus, had a similar realization before buying a car:

I was thinking of getting a car, just before they started the Humphrey Go-BART. Now I feel that I can get wherever I want to in the Bay Area by public transportation. My worst problem is carrying groceries to and from the house. For that, I often borrow my roommate's car.

Another Berkeley resident, attending community college in Oakland, realized he could make use of BART only at the prompting of a friend:

Well, I was enrolled at Alameda College, but then the car I was using (a friend's) was sold, so I no longer had any transportation, and I thought I would have to quit school. But another friend said that I still had time to enroll at Laney, and that BART would take me right there. I had never ridden BART before, so I was skeptical at first. I thought it

would cost too much. But, I can afford it, and it doesn't take any time at all, so I am very happy with this...

One San Francisco resident required a stoppage of Municipal Railway operations to become aware that he could use BART:

I discovered during a Muni strike that BART went to CCSF, and I have been riding BART here ever since then.

Finally, one Berkeley resident indicated she finds such reactions by car users are by no means uncommon:

Some of my friends have used BART because of car problems, and when they have done so, they have enjoyed it. Several times, I have heard someone say "My car broke down, and I didn't know how I was going to get to X. And then I remembered that BART went there, so I rode BART." It's like BART is used by car owners as an afterthought...

What these comments suggest is that many Bay Area students are not moved by BART's frequent mention in newspapers, or its visibility on elevated tracks near their campus and neighborhood, to see it as a genuine transportation possibility for themselves. Whether this is primarily because of their impressions of its costliness, its limited routes, or other factors is not yet clear. However, the comments also suggest that BART's impact on Bay Area life styles may be much greater in the long run than it is now, as these students' experiences are reproduced by others. For these students, riding BART as an afterthought has generally resulted in their being satisfied enough to continue its use--and, in some cases, to become converted from car dependence to public transit. The processes involved would seem to warrant more intensive study by those interested in reducing car dependence and encouraging BART ridership as a public policy.

o Costs, Convenience, And Comfort

In considering BART's impact on student life styles, it is important to see that, for most students who ride it, BART is an alternative form of transportation to and from campus<sup>1</sup>. It is not the only way

<sup>1</sup>Of our 38 second stage interviewees, 85% specified that travel to and from school was their only regular use of BART. The remaining 15% stated that they also use it for getting to work, for shopping trips, for recreation, for visiting friends, or for some combination of these.

they could get there, since buses, streetcars, private automobiles, and even hitch-hiking are considered realistic alternatives by many. Thus, BART is in effective competition with other forms of public and private transit for virtually all of its student riders. Its impact on students' lives appears to depend in good part on the assessments which students make of the relative costs, convenience, and comfort of these alternatives. In this section, we consider some of the patterns in students' comments about these three dimensions of Bay Area transit, and what they suggest about BART's intersection with students' lives.

The following response of a San Francisco resident, who attends City College there, might be taken as representative of many others, summarizing the relevance of cost, convenience, and comfort to her choice of public transit:

I like BART. I don't know what else to say, it gets me to school. I don't use it for anything else, because it doesn't go many places in the inner city part of San Francisco. I rely on Muni and the jitneys to go other places. I probably would use BART to go other places if it went all over. It's cleaner and safer than the Muni, but Muni is cheaper and goes more places.

#### What Makes BART Expensive?

Almost two-fifths (39.5%) of our second stage interviewees indicated they found BART "expensive," by some standard they considered relevant. Another one-sixth (16%) indicated they found its costs reasonable, all things considered. These responses do not appear to be related to the total dollar amounts spent on BART-riding by the respondents<sup>†</sup>. Thus it would appear that college and university students tend to consider BART's relative, not its absolute, cost to them when deciding whether it is "expensive." But most do not make careful, cost-per-mile calculations, such as might be made by a transportation engineer. Instead, a wide range of matters, which are salient in their own lives, are considered relevant.

One of the most obvious is the tightness of the student's own budget. Two contrasting statements illustrate the point clearly:

<sup>†</sup>Almost one-half (47%) of these respondents spend \$4 or less per week on BART; about one-quarter (26%) spend \$4 to \$6 per week, and about one-fifth (21%) spend more than \$6 per week.

BART is very expensive. I have to watch my budget very carefully in order to make sure that I will have enough money to pay all of my expenses. Since I have not been riding BART this summer as much, I've noticed how much extra money I have. I worry about money a lot, and that upsets me. I think it's bad for my health. (Berkeley woman attending Laney College)

I love it. Wouldn't want to travel any other way. It's a little more costly than the bus, but that's fine with me. I can afford to ride and enjoy it. (DVC student, residing in Lafayette)

Being able to afford BART may, in turn, depend on working while attending school:

BART is very good, but very expensive. From the East Bay to San Francisco, it costs an outrageous amount of money. It's too expensive for most people, but not for me, because I have a good job. (San Francisco resident, attending City College there)

Even more common is a comparison of BART's cost with the costs of alternatives. Images of bridge tolls, parking fees, gasoline prices, and car repair expenses help to make BART's costs seem reasonable to some students:

Well, \$7.20 a week doesn't seem like a lot to me. If I drove, I'd have to pay \$2.00 a week for the Bay Bridge alone. And gas would be very expensive. (Oakland resident, attending Golden Gate University in San Francisco)

It's very expensive, but to ride AC Transit to school would be a nightmare, incredibly long and annoying. And, five dollars a week doesn't seem like much in comparison to the costs of maintaining a car. (Berkeley resident, attending San Francisco State University)

The money isn't really a problem, because I used to drive to school and pay fifty cents a day to park, before BART happened. (Oakland resident, attending U.C. Berkeley)

I don't think of BART as very expensive. If I drove a car, I'd spend more, and I just can't stand driving in traffic. (Walnut Creek resident, attending Diablo Valley College)

When students compare BART fares with those of other public transit systems, however, BART's "expensiveness" seems evident to them:

The expense is the biggest problem. I feel that loads of people would ride BART if the fares were the same as bus fares. (Oakland resident, attending City College of San Francisco)

I used to think \$3.00 a week was an outrageous amount to spend on travel. I compared BART with New York's subways and found it inordinately high. But I have since found out that New York subway fares have gone up, too. Now I don't think it's extremely expensive--just expensive. (Berkeley mother, attending Laney College)

#### BART as a "Cost of Education"

Calculation of BART's expensiveness also depends, for some students, on the educational alternatives which it opens up as effective possibilities. One student, a 26 year old Black man who lives in Berkeley and attends CSU-Hayward, had it worked out this way:

To me, BART's actual cost is low. Paying for BART is something that I include when I consider what I spend on my education. For example, I can't afford to go to Stanford, where I was actually admitted, (because of the high tuition fees). But I can afford to go to Hayward and ride BART to get there. So, by contrast with going to Stanford, riding BART to Hayward is not really expensive to me.

However, he went on to add:

But BART's real cost is very high. As a system of public transportation, it should be something everyone can afford. And it's not.

#### The Costs and Meanings of Time

Our interviews made it clear that dollar costs and other costs, particularly those involving time, are intertwined in students' calculations of BART's expensiveness. One interviewee spelled this out:

BART is costly in terms of time. There is no regular schedule of trains, so you always have to allow extra time to be sure you get to your destination on time. On the other hand, the cars are very quiet and I can

study, so I don't waste the extra time... But riding BART is not like riding a bus, where you just drop a quarter in the till. It's not unusual for me to miss a train because of a line at the ticket machine. I try to buy tickets ahead of time so I won't have to wait. But that has a drawback too, because then I have to be careful not to lose the ticket or crumple it up.

Others gave evidence of what time means in the specific routines of their daily lives:

I have a car, but my wife works in San Francisco, and she needs it to take our son to my mother's house before she goes to work... I considered, at one time, what it would mean if we both rode BART, and I decided we would both be too rushed in the morning... I can't take our son to my mother's house, because she lives too far from a BART station.

Most students who go to Hayward don't live in Hayward. Most of them have work or family responsibilities. They use cars because it cuts down their travel time significantly.

It takes me an hour and a half to get to the (Hayward) campus (from San Francisco). But since I work at night, and have a lot of time in the day, the long commute is not so much of a problem. I use the time on BART to study. Part of the thing that takes so long is waiting for trains. I really think BART's scheduling could use some improvement. I do find I usually can study while waiting for the train,

Well, BART seems to take a long time. But I'm not in a hurry. All I have to do is get to school on time, and after my classes are over, I can mosey around and poke my nose into just about anything. I like to look into classes and watch people doing art work or playing instruments. I never had the time to do those things when I was young, and I'm too old (55) to do them now, but I like watching others having fun.

### BART's Lack of Convenience

Our second broad area of concern, which relates complaints about time with complaints about the geographic coverage of the BART system, was labelled "convenience" by a number of interviewees. Again, sharp differences among students' experiences were evident in the comments on BART's lateness and the waiting that it requires:

BART is an inconvenience, but it is the lesser of two evils. The other one is buses. BART is usually late; and when it does arrive on time, it usually breaks down somewhere along the line.

It's slow sometimes. When BART gets delayed, it's usually a long, long, wait. They don't fix the problem quickly enough.

I like BART, but it's late too often.

BART always involves a certain amount of waiting; this is unpleasant.

Out of two years on BART, I have only waited over 15 minutes for a train about a dozen times. I don't consider that a problem.

The worst thing about it is that I've already waited over a half hour several times at the MacArthur Station to transfer.

BART is basically okay. I don't like the fact that it isn't scheduled. For example, you can't go to a station and know exactly when a train will come. As it is right now, you have to go to the station well ahead of time. I don't like that at all.

The only thing I care about in regard to BART is whether or not it runs efficiently--and it does. I've only been delayed by BART two times. The bus takes too long, which is why I don't ride it.

A related group of convenience comments emphasizes the number of BART stops, and the issue of their nearness to points which interest students:

I wish BART went more places. I love to go to San Francisco to the art galleries, and I would do it more often if transportation over there weren't

such a problem. For example, if BART ran on Saturday, I'd go to a coffee house in North Beach and listen to music. I'd enjoy a late dinner, and then go home. Now, I have to rely on getting rides from friends, and most of my friends just don't care to spend the day as I was describing.

BART should stop at more places. Like AC Transit. And it should run on a regular schedule, like AC Transit.

My friends and I don't discuss BART much, except we all agree it's great for shopping. We've sometimes speculated that the various shopping centers, such as the Sun Valley Mall, would benefit tremendously if BART ran on weekends.

BART is very close and convenient to where I live. I moved recently, and I made sure that I chose an apartment near to a BART station. BART makes me more self-sufficient and more independent of my family, and their car.

My feelings about BART are pretty strong. I'd like to see it improved, of course, but there is a lot about it that I like. It runs fairly often, it's clean and safe. But it is too expensive and it does not have as many stops as it should.

BART routes are bad. They never take you where you want to go... I like the fact that it's so clean, and I use it sometimes sort of like a tourist. But when I need to go places, like shopping, or the YWCA, or to visit friends, I take the bus.

I don't feel BART is bad, although I don't ride it very often. It just doesn't go anywhere near my door.

What emerges from these two sets of comments on convenience is a reminder of the interactional quality of BART's impact on life styles. Students making these comments begin with the concerns and exigencies of their own lives--with their desires to avoid delays and waiting, and for exact public-transit schedules on which they can depend in pursuing their own affairs. Individuals vary in their judgment as to when and how long a wait constitutes a problem, as the quoted comments suggest. But few

refer to the specific consequences which waiting and delays have on other parts of their lives. Rather, the comments tend to focus on the unpleasantness of the waits and the delays themselves.

Behind talk of schedules, however, there may lie a systematic concern of college students. As they move from the control of their parents into more and more autonomous lives, young people of college age are faced as never before with the task of scheduling their own activities, fitting work, play, study, and personal relationships into a coherent pattern which serves their purposes and accords with the norms of the groups in which they live. College life exacerbates this task, providing students with much freedom to schedule study and classes, but requiring them at intervals to meet deadlines (e.g., to take examinations and write papers) which test the effectiveness with which they have "spent" their time over a period of weeks or months. As one Berkeley senior put it:

I feel like I'm constantly juggling: home, school, getting there, getting back--figuring out when to do what...

For many students, therefore, learning to create and work within operable schedules becomes an important feature of their college years. Thus, it is not surprising that the inconvenience of waiting and of delays is a major point of connection between BART and these students' lives.

#### The Comforts of Riding BART

While most comments on BART's costs and convenience took the form of complaints, this was not true of those which compared BART's comfort, cleanliness, safety, and general pleasantness to those of buses and streetcars.

For some students, what stood out was BART's quiet operation and relaxing air:

I enjoy riding BART because I find it relaxing. I can read for pleasure on BART with no problems. I also like the low level of noise, which allows me to drift off into my own thoughts.

BART is very relaxing to me.

BART doesn't seem noisy, because you can't hear the street traffic, as you can on the Muni.

I ride BART because I am just too old to ride buses. Buses are too noisy and jerky for my nerves. And I can do my knitting on BART. It's quiet enough so that I can count stitches, and I have enough room to move my arms.

I don't enjoy riding (BART) into the City, but out here on the Concord line, it's more relaxed... The scenery is pretty.

I like BART's atmosphere; it's more airy.

Many students compared BART's cleanliness favorably with that of other types of transit, or with the experiences of the urban area generally:

BART is much more comfortable than the buses, and it is amazingly clean and smoke-free.

I am amazed at the cleanliness. New York subways are unbelievably filthy.

I used to ride the buses, but I much prefer BART. The buses stop every 15 seconds, and they are hot and smelly.

BART is a clean, nice way to travel.

I have to admit that I like BART, in spite of all the faults. It's very comfortable and clean. San Francisco and Oakland are very dirty towns, and it's a relief to ride on BART and get away from all the filth.

A similar group of comments focussed on the different kinds of behavior which seem to be elicited by BART and by other transit modes:

BART saves me the morning headache of riding on the Muni. People are like animals on the buses then... BART is faster and a lot more pleasant.

BART is the lesser of two evils. I ride it because the time I go to school and the time I return is rush hour. Anybody who rides the Muni at those times takes their life into their hands.

The Muni is run very badly--noisy, smelly, and unsafe. And not enough of them run. Sometimes three or four will pass, and they're all full. And when one finally stops, it's crowded, anyway. You can't do anything on them except hang on to your wallet.

There are no drunks, eating, or smoking on the (BART) trains, so they're pretty pleasant. It's better than streetcars. I'd rather walk than ride

a streetcar. The drivers and the people are horrible, and won't help you, and you see a lot of weirdos. It's just too much for me to cope with.

It's much nicer than New York subways, where everyone is either rude or smoking. The people who work on BART are very helpful.

Buses are a little risky, in terms of the kinds of people that ride them. People on BART seem to smile more. I feel safer.

Complaints about comfort and safety were lodged against BART by some informants, however:

BART is very uncomfortable if it's crowded and you can't get a seat. There is nothing to hold on to, and it is easy to fall.

I don't like riding BART. It's too noisy and too crowded.

BART is pleasant, but it's not quite as comfortable as the bus. It has harder seats than the buses. And there aren't enough seats.

I don't like the commuter rush hour. It's hard to stand in BART, because there's no hanging metal bars. I once fell over and lost my balance. I wasn't hurt, but I was embarrassed. My books and papers spread all over the floor...

The first time I went on BART, I was in an accident, and I saw people hurt... I have never been back to BART, and I intend never to ride it again.

I used to live in San Jose and ride the BART from Fremont to Berkeley. It seemed that about one out of three times I rode it, something went wrong.

Many of the specific apprehensions about BART's safety concerned the stations. Here are two representative examples:

I am not really comfortable in the stations. They are too deserted and I worry about someone trying to hurt me, or take my purse.

I feel that the BART stations are unsafe. There are no barriers to separate the people from the oncoming trains. And I often see young children come dangerously close to falling on the tracks...

Another complaint, heard several times on the Concord line:

The stations are great, except that they can get very cold and windy, and there's no place to sit.

However, most comments on BART stations were affirmative; for example:

Much better than the bus stations. BART stations are very clean and very nice...

o BART's Influence on Students' Choice of a College

Since BART is a relatively new mode of public transit, linking sections of the Bay Area with some of its campuses in new combinations, we addressed in our second stage interviews the issue of whether BART's availability had influenced students in their basic choices about which campus to attend. For many students, the answer appears to be "yes"; however, the kinds and degrees of influence varied considerably, as one might expect.

In at least one case, an interviewee (quoted in an earlier section) indicated he had lost the use of a friend's car, and had intended to drop out of Alameda College, when a friend pointed out that he could enroll in Laney College and ride BART to that campus--which he now does.<sup>1</sup> This would seem to be the most direct kind of an impact both on a student's choice of campus and on his felt ability to attend college at all. A similar importance can be attached to BART's place in the plans of the student (also quoted earlier) who could not afford Stanford but could afford to attend Hayward by riding BART there from his San Francisco home. Some students laid emphasis on the importance of BART in their choice, while making it clear that other factors were also important. A Hayward resident said:

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<sup>1</sup>It is worth noting that Alameda College, which the student felt he must leave because he had no car, advertises prominently in the official newsletter of the Peralta Community College District that there is "Easy Access to Alameda" via public transportation: "For example, AC Transit bus lines 51 and 58 offer popular service, and it is possible to work out numerous combinations of bus and Bay Area Rapid Transit System service." (Peralta Pathways, Summer 1976, Page 3)

Yes! I did choose CCSF partly because of BART; it's the perfect transportation for me (travelling from Hayward). I really love City College--it has my major!

An Oakland resident, who also rides BART to CCSF, said:

I just wanted to try my hand at school again, with no particular goals in mind. BART definitely had a part in my choosing CCSF, because it went to the school, and that made a difference... I'll go to U.C. Berkeley next year, probably.

And a San Francisco resident made a prediction of BART's future importance:

I chose CCSF because it's free. I like the school; I'm just now getting settled into it. (Since I didn't know about BART until the Muni strike), it didn't have any effect on my choice. But it probably will in the future.

A few other students commented that BART is their "only way" of getting to their campus, or that it had "sure solved my problem of getting to school," without directly stating that BART had resulted in their being able to attend college, or to choose a particular campus.

More common in our interviews were suggestions that BART is, in most cases, an alternative means of getting to a campus which students attend for other reasons, but that it significantly extends the range of living and campus attendance arrangements which students can workably manage. In particular, BART seems to make long distance commuting feasible for some students who might not have been able (or willing) to manage such distances and times via other transportation forms. One student, quoted earlier, indicated he had moved from San Francisco to Oakland for personal reasons, while remaining enrolled in the City College of San Francisco, to which he commutes directly by BART. Other examples were provided by students who reported moving to Berkeley while continuing to attend classes at CSU-Hayward, sometimes daily making the trip of about an hour each way, riding BART and AC Transit buses both in Berkeley and in Hayward. Another student holds a work-study job in a college administrative office at CSU-Hayward and commutes there five days a week from her home in San Francisco's Noe Valley District. Each day, she rides the Municipal Railway for 30 minutes to a BART station, takes a 35 minute ride on BART's Daly City to Fremont direct line, and finally catches AC Transit's #91A bus to the Hayward campus for a 12-15 minute ride; she then reverses this routine in the afternoon or evening. Her carefully calculated cost: \$77 per month.

Data compiled by the University of California, showing that BART has made a significant dent in the automobile use of long distance commuters to the Berkeley campus, provide further support for the general proposition that BART is an important factor in students' continuing abilities to manage the trip to campuses from the residences which choice, family constraints, or economic necessity allot to them.

In answer to direct inquiries about BART's importantly affecting their choice of college, most of our student respondents gave negative answers of one kind or another. Most students insist that they chose their college for its low cost, for specific programs it offers, or for its general level of prestige. Here are examples of such responses.

I chose Laney because it doesn't cost much, and it has the kind of program I want (pre-nursing). The fact that BART takes me right there is a help, but if it didn't, I would find another way to get there (from Berkeley).

I chose CSUH because it was what I could afford. I don't know if I will transfer to another school or not. BART's going to Hayward wasn't a deciding factor, but I did consider it. I had decided to go to CSUH, and then I thought "BART goes there--that's an advantage I hadn't considered."

I chose Hayward because it has a good history program. The fact that I can get there by public transportation is an asset.

I used to go to San Francisco State. I came to Hayward this summer because of a program here that San Francisco State doesn't have. I don't know if I'll go here in the Fall or not.

I go to San Francisco State because I can't afford California College of Arts and Crafts. Being able to use BART is nice, but I think my sense of survival would make me find some other way if it wasn't available.

I could go to Laney, and may still do that if commuting to the City gets too strenuous. I chose S.F. State because I always wanted to go to a real college.

I chose S.F. State because it was in the City, and I had heard it was better than City College. I have no car, so I had to pick a school near public transportation. I like S.F. State, but I'm not really attached to it.

I chose Laney because it's close (Oakland), and some of the programs interest me. It's nice that it's close, but it wouldn't matter if it were far away. Transportation makes no difference unless it's not there.

I chose DVC because it's the best junior college in the area, and it's easy to get there (from Lafayette) by BART.

I go to DVC because it's close and cheap. I can get there easily (from Lafayette), and it has the courses I want to take.

I chose CCSF because my parents can't afford to send me (away) to college. I like it; it's an okay school. BART is handy to get there, but I could get to school anyway if BART weren't around.

I chose CCSF because Laney seemed too Mickey Mouse, and U.C. Berkeley was too big. BART fits in very well with my choice. It was definitely a factor--that it goes right there..

I go to CCSF because it's in the City. I could ride Muni if BART wasn't there.

In general, then, it would seem that BART's providing access to a campus has frequently been a factor in the campus choices of these students (all of whom now ride BART), but that it typically is only one of several such factors, and that its relative importance varies considerably. Of particular importance appears to be the possibility of living some distance from one's college, and still getting there in reasonable comfort, if not quickly or inexpensively. Finally, from several students' expressions of their lack of "attachment" to the particular college they attend, we would expect BART access to be more important relative to other elements in college going choices.

o How BART Influences Conceptions Of Self And Future

College and university attendance is, for most of those engaged in it, a time of hope--of preparing for one's future, learning a vocation or the background for it, improving one's mind and one's prospects in life,

aspiring to things which are better than one's present lot. Home to campus commuters, who seem to include most of BART's student riders, are generally at a disadvantage, as compared with on-campus residents, in using the academic and cultural opportunities of their campuses. They tend to begin college with more modest aspirations toward earning degrees than do campus residents, and to be oriented more toward finding financial security. As they progress through college, their degree aspirations also tend to diminish more than those of campus residents, and they become even more oriented to financial security, less to a variety of other long-range goals. In terms of self-conceptions, their sense of personal competence tends to diminish more than does that of the on-campus resident. (See Chickering, 1974, for details of these findings.)

How does BART affect, if it does, students' senses of themselves, their futures, the possibilities inherent in the world they will occupy? While not precise on the issues specified above, our interview data do contain some responses which are relevant to them.

#### Optimism

With a few exceptions, the responses of students in our sample indicate a general tone of hope and optimism among BART's student riders. While many students presented complaints about, for example, the current state of BART's convenience, many coupled these with hopeful expectations that the BART system will improve with experience. Students often volunteered suggestions that schedules be set up, that fares be lowered, that express trains be instituted, that BART be better publicized, etc.--in the evident hope that these suggestions might be taken seriously, and that the system would search out ways to improve itself. Behind such hope often seemed to lie the prevalent American belief that scientific/technological pragmatism, through "experiments" with experience, will assure continuing improvement of Americans' lives. BART seems to fit well, in these students eyes, with the idea of progress.

#### Modernity

Our interviewees' direct comments to their own senses of self often suggested that their sense of progress is enhanced by their personal identification with those aspects of BART which we might label "modern"--its cleanliness, newness, speed, and the strong symbolic quality of its organized, mechanical/electronic efficiency. Here are comments which gave the flavor of this response:

I feel like I'm keeping up with the times by riding BART. I'm getting out and going places, and I'm not afraid to try new things.

I think of BART as slightly luxurious. It makes me feel like a modern, doing-my-trip kind of person.

It makes me feel I can change with the times... BART is progress, and I'm going along with it.

### Changing The Future

Coherent with this sense of personal implication in BART's modernity is the anticipation that the future will be different from the past, and that BART will help to make it so:

BART will definitely change the demographics of the Bay Area. People will live where they want to live, not where they have to live, which is neat. I like that kind of freedom. But you do have to pay for it; BART is expensive.

Yeah, BART is definitely the beginning of mass transportation, and I think it's a good model for systems in other areas. It has a few problems, but once those are worked out, I don't see why it can't replace cars.

Well, I guess the most important thing about BART is just that it exists. The need for public transportation is legitimized by BART's existence. If you think about it, BART is really amazing.

A few interviewees couched their hopes for the future in the conditional. BART can make a big difference, they felt, if people approach it correctly. One student at Diablo Valley College felt BART could help to overcome the isolation of urban and suburban life:

We need to use fewer cars; we need to be more conservation-minded, and to pollute less... People should combine their interests (in supporting) public transportation. Then people would be less separate from other people... Most people I see on BART look like they know what they're doing. They look like they belong.

A San Francisco State University student, commuting from Berkeley, saw exciting possibilities for BART stations as community art galleries:

I'm am artisan, a potter, and so I'm sensitive to the atmosphere and the decor of the trains and the stations. The best aspect of the stations is that they are safe and clean, not like the New York subway stations. But, in an esthetic sense, they are completely lacking in beauty or thoughtful

design. Those walls are crying out for murals, for examples of people's art works... What an idea--BART stations could become galleries, and BART managers the art patrons of the 20th Century!

#### Self-sufficiency

Comments on this area seemed to suggest that BART helps to enhance many students' senses of their own personal self-reliance, and their ability to make rational choices. These examples make the connection explicit:

It sort of makes me feel that, because I use it, I am a step closer to self-sufficiency and independence.

For me, it's almost like a sense of accomplishment--that I am doing something right. Like, I'm in control, and I've chosen to ride BART.

I know that BART challenges my ability to deal with large numbers of people.

I get on BART, and I feel like I'm doing something for myself, like I am helping myself get an education, and I'm cutting down on car use.

As we suggested earlier, it is not clear that BART has been making much difference in the car dependence of most Bay Area college and university students. However, the combination of their sense of guilt at using cars (noted earlier) and BART's association with controlled, rational choice may be seen as one strong set of cultural assets which should aid BART in effecting this change.

#### Regional Identification?

Contrary to what had been hypothesized earlier, our interviews turned up very little indication that BART ridership tends to increase college students' identification with the metropolitan Bay Area as a whole. Most interviewees responded rather blankly to inquiries on this issue. A few cited alternative feelings:

BART gives me a sense of total participation, not by area, but just by the fact that I made a decision to ride it instead of getting a car.

No, it's not a regional experience for me. In the City, it's very much an urban experience. Out here (in Concord), it's suburban...

### Scattered Pessimism

Finally, a few students' senses of themselves were left unvaryingly pessimistic by their BART experience:

BART is okay; it's inoffensive, except when it's late. I don't get all worked up over it. It's a nice place to sleep, in between my stops... Oh, yeah, BART smells funny sometimes, and that's annoying... BART is over-rated. Like everything else, it doesn't live up to my expectations.

In short, insofar as BART is an influence on its student riders' conceptions of themselves and their future, it appears to be a positive one, to enhance their images of being part of a progressing, self-correcting society, with a bright and modern future. It seems to support their feelings of being able to choose the parts of their life style (here, their transportation mode) rationally, with personal autonomy and a concern for the greater good (i.e., the environment).

It is difficult to tell how realistic these conceptions are, of course. Students' statements about themselves and BART's future are based on experience, but it is at best a limited experience. More modest assessments of their own futures, which occur to most students as they pass through college, and to commuting students more than others, will doubtless still follow. To the extent that BART provides a basis of hope and optimism among Bay Area student commuters, however, it may help to counter-balance the normal pressures which drive commuter students' self-esteem downward, and thereby to help them become more self-reflective and effective persons.

#### o Images and Impressions: The "BART Experience"

On the basis of some richly descriptive comments which emerged in early conversations with students about the existence of a "BART experience" as such, we included in our second-stage interviews a question asking our respondents' feelings about BART, and also asked about what, if anything, they considered the "BART experience" to be. Although research did not fully clarify to what extent BART's imagery effects its student ridership or the educational institution as a whole, this information is being reported for that audience which is interested in how the system is perceived by this segment of the population. Three main dimensions of the responses to these questions, together with some descriptive comments given in reply to other questions, are summarized here for their relevance to BART's place in students' life styles.

### BART as Symbol and Public Event

One dimension of the meanings which many students attach to BART is largely symbolic: BART is not a transit alternative for the individual person, or a system of resources organized to meet certain social purposes, but primarily an event, a public happening, a matter bruited about in the communications media, a topic of conversation. As we indicated earlier, some interviewees said they and their friends had begun riding BART only as an afterthought, suggesting that it is not in the forefront of their awareness as a real transit alternative. By contrast, some students had strong emotional and analytic statements to make, which often appeared largely unrelated to their actual ridership on BART.

One graduate student in business administration at U.C. Berkeley, for example, said he hated BART's "inefficiency," and wanted to talk on and on about it to our interviewer:

I pride myself on my knowledge of the financial atrocities that the BART directors have put us through... I depend on efficient transportation to carry on business transactions around the Bay Area. BART doesn't serve this purpose... I think it's a public fiasco and a public disgrace and a bad business...

Such reactions are, on reflection, understandable in light of the vast publicity given the BART system in newspapers and on television news programs for a decade before it began operations, and the proportion of that news coverage devoted to the unanticipated financial and technological problems which the system has faced. For most residents of the Bay Area, BART began long ago as a public event, a massive collective undertaking with dramatic financial and technological aspects, which were to bear fruit, somehow, as actualities in their lives at some much delayed point in the future. For more years than it has been in operation, BART was only that: a much discussed, future possibility of the best in modern urban transit. Such events are grist for the mills of public criticism, comment, and elaboration by citizens--perhaps especially students, whose engagement in studying, being tested, testing others' ideas, and wrestling with the truth is more acute than is that of persons in their later years. Thus, some students hold the BART system accountable for its promises:

BART is very unreliable, and it has never run as fast as it's supposed to go. When BART first started, all the ads said it would run at 80 miles per hour, and I know it doesn't go that fast.

My boyfriend keeps telling me that BART is actually a symbol of technological progress, but I don't agree.

BART is over-rated. Like everything else, it doesn't live up to my expectations.

Others find that even the present reality of BART is a ready topic of derisive conversation on occasions, a butt of jokes reflecting the absurdity of modern urban life: One U.C. Berkeley graduate said:

Once I was on BART in the rain, and my train had to switch tracks. Everyone was packed in like sardines and the train even stopped in a tunnel for about 15 minutes. I never talked to more people in my life than I did then. Everyone was swapping "BART delay" stories. When we arrived at the next station on the wrong side of the tracks, everyone was laughing. The ones who got off were wishing luck to the ones who were continuing on...

One young man revealed that BART excites his deepest fears:

BART is a deathtrap. The tunnels and everything are unsafe. I'm not concerned with the computer problems, or running past stations. I am just freaked out by tunnels. If an earthquake came, I wouldn't feel so bad on top of the Bay Bridge. But, being in a tunnel--there's nothing I could do.

#### BART as Part of a Still-Unreal Future

A related dimension in students' experience of BART is a slight air of unreality about it, difficult to pin down and describe accurately:

I think of BART's experience as an "almost" feeling. BART is almost the solution to pollution problems, but not quite. And it's almost the perfect way to travel, but not quite. It's frustrating, that BART isn't quite "it" in modern travel.

It's a kind of non-experience. But a non-experience is an experience, too. BART doesn't fit in either of those categories. You could call it just a kind of toy. It isn't substantial. It seems just temporary.

BART doesn't convey any sense of going anywhere different. It is almost like standing still, only the name of the place where you are changes...

Some interviewees described feelings of unreality in connection with an experience of being encapsulated amid crowds, in some way out of control of one's fate:

Riding BART is just like living in any crowded city. It is noisy, dangerous, confused, and plastic. It is like being surrounded by strangers with no chance of meeting anyone who is nice...

...I feel as if I enter into a cocoon when I get on the trains.

BART is a box. I feel like I'm a package, being shipped somewhere, when I ride BART.

Riding BART is like a film being looped--like when they cut a piece out and repeat it several times... Each time I ride BART, it's the same: fast, pleasant... The film is my life, and a part of it gets repeated a lot.

Part of this sense of unreality and non-control apparently involves the bare, functional design and feel of BART's trains and (especially) its stations:

BART is very sterile to me. It seems to have no life of its own... The stations are almost beautiful to me.

The stations--they're like bathrooms, all tiled and clean and sterile. They don't turn me on or off. I think they should have some kind of decoration.

BART riding is just bland, unless the train is stopped because of an accident or malfunctioning.

The stations are kind of lifeless and drab. I never pay much attention to them.

There are no "soft" edges in the stations. It's all hard and angular. The total effect is not soothing. The walls glare.

I can't think of anything to say about the stations, except that they have too much echo...

This functionality of design appears related, for many students, to a sense of BART as a symbol of the future:

BART is kind of hip and modern. But I miss the buses in a way, getting to know the line drivers. You cannot do that on BART.

BART is very sleek. It is like a futuristic car in design.

Well, it's like a space ride--like something out of science fiction.

BART is very modern, but also very plastic. Feels like a space ship.

The imagery of aerospace travel, with its connotations of excitement and efficient speed, combined with high artificiality and uncertainty, recurs in many student comments:

BART definitely has a modern, aerospace, computerized feeling. I was in it once when it got stuck in the tube. But mostly I feel safe now.

BART is very streamlined. It's like the silver rocket.

If there are no malfunctionings, the time on BART passes quickly and almost surrealistically. It makes me feel like a Martian.

BART is like nothing else in the world of rapid transit. It's clean, and it's like something out of a science fiction book. It has long, almost feline lines. It's called a train, yet it is like no other train I have ever lived on.

BART is calm, but it also has an element of excitement to it. (The train) starts out in one place, plunges you into darkness, and then you find yourself in a new place. It's almost like flying in a plane at night.

#### BART Seen as "Not for Normal People"

A third dimension emerging from our interviewees' experiences of BART concerns its identity as a public service, designed for the needs of the people whose tax money pays for it. A considerable number of respondents volunteered comments which suggest that BART's public-service identity among college and university students is not secure. Some respondents felt simply that BART's designers have taken insufficient account of many riders' needs to understand the system:

The ticket-machine system doesn't make much sense. It takes too long to figure out, so it's inconvenient. And at least one of the machines is always out of order at the stations I use. You have to be able to read to use the machines, and read English at that. A lot of people can't. I've noticed a lot of older, non-English speaking women riding BART, and they have a lot of difficulty using the ticket machines. They're also out of reach for children, and the people in wheelchairs.

The maps and the routes are well done, but they're of no use to someone who doesn't read or speak English.

Most of the people in my neighborhood (the Mission) don't ride BART... Some of them have language problems, and can't because of this... The signs and the machines should also be printed in Spanish and Cantonese.

Others felt that insufficient attention had been given to the needs of certain groups for safety in the BART stations:

The stations make me nervous, because they're underground. If I had to run anywhere, there wouldn't be any place to run.

I don't feel safe in the stations. They are isolated, and poorly lit. But the restrooms are nice.

I don't think they've given enough attention to women's safety in the stations. Some of them are awfully lonely places, when just one or two people are on the train platforms.

The stations feel pleasant enough to me, but they're not safe for little kids. No railings to protect them from falling into that electric rail.

The stations are okay, but I think they're a dangerous place for kids. There are no rails to keep them from falling on the tracks.

When asked to describe the groups or types of persons whom they saw on BART trains, our interviewees named several groups--business executives, students, and school children--much more frequently than others. Here are representative responses:

At rush hours, I see executives, and working people. Other times, I see shoppers and students.

During commuting hours, I see a lot of executives, but, otherwise, I just see individuals.

I see businessmen, students, unemployed people, and Muni drivers.

I see a lot of little kids with their teachers. Other students, some working people. They're usually in a hurry just like everyone else.

A lot of students.

I just mainly see students and some housewives.

The only group I notice is elementary school kids on field trips with their teachers. That seems like a fantastic way for people to use BART.

Some of these comments reflect a tendency of many American students to refuse making statements which may seem to describe people collectively, as if avoiding "prejudice," or "guilt by association." One student made his refusal explicit:

I don't like to categorize people. I just see them as individuals.

Other respondents were not so reluctant to report their observations of groups represented on BART, and some went so far as to volunteer explicit analyses by class and race:

It looks to me as if BART is used mainly by people who live in the suburbs: BART supports suburban people's travel needs, but the money comes out of the urban dwellers' pockets. Suburban people mostly need to get to their workplaces and back. They don't ride BART as tourists, so as to bring revenues into the City, to any extent.

Most of my friends feel it is a giant tax burden on the poor and working class people...

Most of the people I see on BART are white or Asian. I suppose most of them are middle class suburbanites. I feel that BART is too expensive for most working class and Third World people. And that's unfair,

because we are the ones least likely to be able to afford our own transportation. Third World and working people are supporting BART through taxes, but most of them are unable to use it because of the high cost.

BART is a trip for white, middle-aged businessmen who've got the money, and who travel between urban and suburban areas. Also, BART displaced a lot of minority families when they built it, which is outrageous. BART doesn't run for working people.

BART seems to be based on profits, not human needs. It was a great mistake to make it so automated. They could have created lots of jobs, which poor people need, as ticket sellers, and that sort of thing.

I see working people and students, and executives, riding BART... Somehow I just can't see a high-powered executive letting himself get pushed and shoved on the Muni...

I think BART has a middle-class, semi-sophisticated air to it. You don't see many bums or winos on it, as you sometimes do on buses. The whole BART experience is sort of clean and pure.

BART is not for normal people, just for financiers, commuters of a certain class.

Whatever the accuracy of these students' observations about the ridership of BART, and their volunteered inferences from those observations, it seems clear that many students experience BART as a "middle-class" form of transportation: clean, comfortable, modern, and slightly expensive. Many of them relish this; none said they dislike its place in their own lives. If these data are at all representative of the larger student population at Bay Area colleges and universities, however, a very substantial number of such students may be said to view BART as something other than a public service designed for those who need and pay for its support.

### III. CONCLUSIONS AND IMPLICATIONS

In drawing conclusions from the data just presented, it is worthwhile to recall what was said at the outset about the exploratory character of this sub-study: Our data gathering has not sought statistical representativeness of identifiable, discrete populations, but what has been called "theoretical sampling" (Glaser and Strauss, 1967) a sampling of the major dimensions and issues along which the campus and transit lives of our respondents and their institutions are currently organized, insofar as they are related to the BART system. In such a study, bare conclusions are rarely the point of the matter, and a thorough study of the detailed findings is necessary for the reader to understand what has been learned, and to make his or her own judgement of its worth and meanings. For that reason, both survey data and specific quotations from respondents have been presented for the study and reanalysis of others. Here, we suggest some of the conclusions which may be drawn from an overview of these data, viewed from the perspective of a sociologically informed citizen with concerns both for our institutions of higher education and for the policies governing public transit in the Bay Area.

#### BART and the Commuter-Vocational Culture

From that perspective, it may be said that, most broadly, BART is having the effect of confirming both colleges and universities and their students in commitments to commuter campuses and life styles, with all the consequences for institutions and individuals which that entails. (See Chickering, 1974) In other words, to the extent that BART has provided a new and desirable method of reaching campuses from homes far distant, it is confirming that institutions need not face the problems of high capital construction costs and space limitations to build on-campus residence halls, or negotiate student housing nearby in the interests of greater student-body cohesion and community. It is confirming the viability of the commuter campus for the many Bay Area institutions which have already been moved in this direction by financial considerations, by neighborhood conditions, and by the salience in American culture of the private automobile.

While the effects of such commitments on institutions as such have been relatively little studied, they would appear at minimum to reinforce the prevalent segmentation of campus life into discrete compartments, with only minimal commitments and contacts between the institution and its students, and as a consequent further attenuation of the spirit of campus community which was of such concern to both students and campus officials over the past decade. Trow and Clark have pointed out (Newcomb and Wilson, 1966, pp. 17ff) that such attenuated commitments tend to be associated with the size and complexity of college and university organizational structure, and with strong, bureaucratic authority

wielded by administrative officials rather than faculties or students. BART, as simply one attractive commuting method, cannot be held responsible for such effects, which pre-date its existence. It is well to remember that only a small proportion of Bay Area students ride BART at all, so its impact cannot be considered great quantitatively. Nonetheless, to the degree that it affects students' life-styles at all, BART's major impact on Bay Area colleges and universities may be to support and extend the pattern of home to campus commuting, by fitting in smoothly with it.

Among students, our data suggest that BART ridership fits most smoothly with what Trow and Clark have called the "vocational culture" in college life. Lacking much time on the campus, or many suitable contacts there which build a sense of "going to college," the vocationally-oriented student typically treats the campus in a purposive, disinterested fashion, like the instructional supermarket that it may appear to be.

To these students, many of them married, most of them working anywhere from twenty to forty hours a week, college is largely off-the-job training, an organization of courses and credits leading to a diploma and a better job than they could otherwise command. These students have little attachment to the college, where they buy their education somewhat as one buys groceries. . . To many of these hard-driven students, ideas and scholarships are as much a luxury and distraction as are sports and fraternities. . . (Newcomb and Wilson, 1966:22)

Such students are very little interested in participating in the governance of the campus they attend for specific segments of each week--much less in taking control of it into their own, collective hands. Like some of our interviewees, quoted above, they came to their campus because it was convenient, or because it had a program they wanted. If its programs, policies, or ethos are not to their liking, they will simply shop elsewhere, assuming they can afford it, or will grimly hang on and bear their dislike for those hours when they must experience it. In the main, however, the life of the vocationally oriented student (and, especially, the commuter student) is segmented between "school," "work," and "living"--with relatively little contact between the segments. (Even college as training for work is a tenuous connection, as the growing criticism of non-vocational study in this country has recently emphasized.)

#### BART and the Concerns of Campus Executives

In the past, systems of transportation have been of relatively little concern to the administrators of college and university campuses, who have presumed that the off-campus lives of their students, including their

ways of getting to and from campus, are their own concern. As financial pressures on institutions have intensified, and as colleges and universities have increased and diversified their administrative staffs (Lunsford, 1968), this picture has begun to change. Campus executives have seen the importance of rational, long-range planning, and of concern for students' easy access to their campus, as bolsters to institutional health and well-being. Advertising their campus' accessibility via mass transit has thus become one means of attempting to speed enrollment growth, still the main basis of academic institutions' financial well-being.

In our institutional sample, some institutions still pursue increased enrollments vigorously--either because the campuses are new and unorthodox (John F. Kennedy University), because their clients can pay their way and do (Golden Gate University), or because a new campus is under-utilized for its size (CSU-Hayward). But a shift is occurring, as some institutions have reached the maximum enrollments assigned by their parent systems (UC-Berkeley), or as State support for added student numbers is limited to a low figure (City College of San Francisco). In these situations, campus administrators find themselves shifting to a maintenance of existing sources of desirable students (if selection is an important concern, as at Mills College and U.C. Berkeley), and turning also to other concerns. Rapid transit now becomes a possible alternative to car dependence among students and faculty/staff, a possible solution to the perennial administrative headache of campus parking. Such concerns are spurred by increasingly prevalent neighborhood complaints and legal actions against parking and traffic congestion (as, for example, at City College of San Francisco and at San Francisco State University), but also by administrators' and students' desires to improve the quality of life on their campuses (made explicit at U.C. Berkeley and CSU-Hayward). This usually means reducing air pollution, and the domination of the campus environment by roads, streams of traffic, and massive parking structures.

In this context, it is important that automobile use (as our student interviews reveal) is taken to be the standard of "convenience," of "freedom" to "go where I want when I want," by which BART and other transit alternatives are judged. Car dependence as a fact has forced university and college administrators to begin there in dealing with transportation problems, and it very much conditions the effectiveness of their efforts to encourage students' transit use. Our institutional interviews revealed that only a minority of Bay Area colleges have gathered data on their students' residential locations, transportation use, work-lives, etc. Only two or three could say that their institution has a policy toward rapid transit as such, or that student transportation had been discussed at several executive staff meetings. But most administrators who were contacted made some reference to staff discussions of "the parking problem," and most campuses had at least one

official who had conducted discussions with officials of the A.C. Transit and/or Municipal Railway systems, attempting to affect the parking problem by getting better bus service to the campus.

Most campuses' relations with the BART system appear to have been more distant, as if assuming that its fixed-rail characteristics, and its well-advertised planning activity, would establish its priorities of location and construction. Those campuses wishing to capitalize on BART's existence could most appropriately find ways of creating access to it, by feeder bus lines, campus-run shuttles, on-campus sale of BART tickets, and the like. (In one instance, in 1964, then BART President Adrian Falk made such a view explicit in a letter to the Trustees of the California State Colleges, mildly reproaching them for locating their Hayward campus atop grades which BART equipment could not climb, and politely but firmly rejecting their hope of special consideration for the campus in BART's location of its facilities.)

BART's space-age technological image, and its symbolic role as the mass transit of the future, seem to have been major influences in distinguishing it from the more mundane, existing bus systems in the attention (and even deference) given it by campus executives, as they have grown in their transit awareness. An authority establishing a new college campus today would be much more likely to seek location near a BART station than to hope that BART would alter its plans for that campus's benefit. Nonetheless, it seems apparent that much might be done to improve the feeder bus access of some Bay Area campuses to the BART lines, and that the interests of BART as well as those of the bus authorities and the campuses themselves would be served by improved communication and coordination of administrative efforts in this regard. We have made specific suggestions to this effect above, in discussing particular campuses' problems.

In connection with BART as an alternative to car-dependence, it is clear that much more study of the car-dependence problem is needed before rational transit decisions can be made. The two institutions in this sub-study which have done the most to gather data and influence student transit choices, U.C. Berkeley and CSU-Hayward, illustrate the difficulties of simple views on this issue. U.C. Berkeley, already very low in car dependence (12% in 1970) because of its high concentration of student housing near campus, has been able to document a further reduction in car use and ascribe at least a part of this reduction to a growth in BART ridership. CSU-Hayward, with surely the highest percentage of student car use at any campus in the area (86% in 1972), has experienced only a slight decrease in that percentage (to 84%), despite being well-served by BART from the main communities which send its students.

Similarly, the small percentage of BART use recorded at each of the campuses which have gathered systematic data (ranging from 7.2% at Hayward

to 16% at Golden Gate University) raises major questions about why these percentages are so low, and makes clear the need for more campuses to gather data about the transportation needs and habits of their students, faculty, and staffs. Contacts made with responsible officials at the ten institutions in our sample suggest that these officials know little of each other's activities, and provided the opportunity for one side benefit of the sub-study: making the data gathering activities on some campuses known to others, and encouraging their cooperation in future activity of this kind.

In other words, BART has been highly visible to campus executives at Bay Area institutions of higher education as part of its high visibility to all citizens, not (in most cases) because of well-considered campus transportation policies. Some of these executives have attempted to tie their campuses' fortunes to the scope and impressiveness of BART's image as the (potential) transit system of the future, and to work out specific feeder-bus connections with it for their students. The Humphrey Go-BART shuttle at U.C. Berkeley, and the inter-city bus service negotiated by the suburbs surrounding Diablo Valley College, are good examples of spin-off advantages to these campuses and their communities, which began with BART's existence but go far beyond the mere fact of connecting its station to the campus with a bus. Thus, BART has, as its proponents have sometimes argued, been a "catalyst" for planning and creating further community services in several areas. The creation of full communication and cooperation between executives of BART, the bus authorities, and Bay Area campuses, which might result in better use of BART and lowered car dependence among students, appears to be still somewhere in the future.

#### BART and the College Student

Within the overall pattern of its support for commuter/vocational life styles, our data suggest that BART ridership has proved compatible with many different arrangements of residence location and style. As we have seen, BART student users include those who live at home under their parents' control (commuting from San Francisco as far as CSU-Hayward, for example); those who live alone or share apartments with roommates, in locations of their own choice (in Berkeley while attending CSU-H, or in Oakland while studying at City College in San Francisco); and those whose married, two-career family lives involve one member's driving a car to San Francisco while the other takes BART to Laney College in Oakland from Berkeley.

In keeping with the changing values of the times, one young woman revealed that she lives with roommates in Oakland five days per week, and commutes via BART on Fridays to spend the weekends with her boyfriend in his San Francisco apartment, returning via BART on Monday to her classes at Laney College. Thus, for those who can afford its fares, BART is a resource for a variety of choices and ways for living.

Students' use of the time while riding on BART appears mainly to be an expression of their own styles and preferences, rather than a source of major impact on those styles. In some cases, however, our informants indicated they have found the BART ride a welcome, new interim of quiet and contemplation in their otherwise harried schedules, a time when they read or prepare their thoughts at a slower pace than they might otherwise have done. Here, there seems at least the potential for a significant, long-range impact of BART on some students, in opposition to the hurry and tight coordination demanded of them in the rest of their lives.

By contrast, it cannot be said that BART has led to community or cooperation among its student users. Instead, the preponderance of our informants' comments suggest that the BART ride is an isolating, encapsulating experience, with the feel of the lonely crowd about it, and only rarely evokes the cameraderie of shared routines, which some transit modes (such as student carpools) seem to evoke. BART ridership does seem to stimulate students' feelings of hopefulness, of self-determination, and of participation in a progressive, modern symbol of a better future. In this connection, however, many students indicated some feelings of unreality and artificiality about that "futuristic" quality, a feeling that BART is one more part a "plasticized" urban environment, in which the person's natural sense of place and intimate connection with his surroundings is largely lost.

For some students, the combination of BART's cost, the relative "inconvenience" of its delays and its fixed-rail rigidity, and the slightly unreal comforts of its symbolically "functional" design form a constellation which they find difficult to affirm and to trust, even when they enjoy its cleanliness and find it useful for their campus-commuting purposes. Some view BART as a part of America's class-race structure, benefitting business executives, suburban commuters, and themselves as students who can afford its fares, much more than it benefits the mass of persons who need it most, and whose taxes provide its primary support. This suspicion and ambivalence of university students toward the "middle-class" life styles which so dominate American culture is by no means confined primarily to BART, of course. Neither does it appear to be the political ideology of a disgruntled few. Our interviews suggest that BART is a highly visible symbol and tool of the kind of comfortable, functionally organized life styles which are commonly associated with middle-class Americans' consumer preferences, and that it reaps both the praise and the blame, the aspirations and the mistrust, which this pattern of preferences brings.

#### IV. METHODOLOGY

As part of the overall Institutions and Life Styles Study of the BART Impact Program, this sub-study was designed to gather and analyze primarily qualitative data on BART's impacts in two specific areas: Bay Area institutions of higher education and the life styles of their students. For these purposes, a sample of ten colleges and universities was chosen, emphasizing campuses which:

- oo are near BART stations
- oo are served by feeder systems to BART
- oo had been publicized at BART stations as accessible by BART
- oo involve travel-dependence by students
- oo include both East Bay and San Francisco campuses served by BART
- oo represent a range of institutional types:

Two year/four year/university  
Public/private  
Liberal arts/Vocational  
Selective/nonselective admissions

The purpose in selection of these institutions was not to isolate BART's impact from confounding factors, or to compare matched cases, but the discovery of emergent impacts and their qualitative description. Therefore, selection was directed toward a rich diversity of cases on the above criteria for relevance, and toward likely BART contact with the institution and its students. Most major institutions which are within short feeder-bus distance of a BART station were included in the sample:

Institutions chosen by this method were:

- oo City College of San Francisco (CCSF)
- oo Golden Gate University (GGU)
- oo San Francisco State University (SFSU)
- oo Laney College
- oo Mills College

- oo Diablo Valley College (DVC)
- oo John F. Kennedy University (JFKU)
- oo California State University, Hayward (CSUH)
- oo University of California, Berkeley (UCB)

Characteristics of each institution on the criteria of relevance are given as part of its institutional profile in the section on Findings.

At each institution, one to five major institutional officials were contacted, in personal interviews and/or by telephone, and a range of issues was explored, including the following:

- oo Has the institution an explicit policy toward BART, toward mass transit in general, and/or toward automobile use by students?
- oo Has BART received substantial attention on the campus?
- oo Do many students or faculty/staff ride BART to study or work there?
- oo What percentages of students commute to the campus regularly, from what areas and distances, and by what means?
- oo What transportation modes other than BART are available to reach the campus, and how are these related to BART?
- oo Does the campus have a major problem with parking spaces for automobiles? How are campus/community contacts of such issues handled?
- oo What is the physical and social environment of the campus as it affects students' residence and travel patterns?
- oo What are the institution's tuition charges, range of student income levels, and ethnic composition of the student body?
- oo Have significant changes occurred recently in any of the above variables which might have an impact on students' transportation patterns?

Personal visits to each campus were made by the sub-study director and/or research assistant, in most cases via BART and the feeder bus systems used by student commuters. Background documents, and data collected by the institutions' officials and student groups, were studied where available. On-campus interviews with student leaders were held in some cases.

In addition, during spring 1976, forty preliminary, semi-structured interviews with students at U.C. Berkeley, Mills College, and City College of San Francisco were conducted, for the purpose of identifying issues and themes to be followed up in later inquiries. In summer and fall of 1976, thirty-eight additional interviews were conducted, including students from most of the other institutions in the sample, according to a structured interview schedule which requested information in the following areas:

- oo Main types of use made of BART, with destinations, frequency, routes, feeder connections, time schedules and typical costs of regular travel.
- oo Associates with whom BART usually is ridden.
- oo Types of groups of other persons frequently observed riding BART.
- oo Residence and family living patterns, and relation of BART to them.
- oo Availability and use of an automobile, and responses to car use, its discouragement as a policy matter, and ecological concerns.
- oo Relation of BART's availability to choice of a campus.
- oo Feelings about BART trains, stations, and the experience of riding on BART.
- oo Use of time while on BART, and its effect on time availability.
- oo Background data on respondent's age, sex, college, year in college, major, residence location, occupation, ethnicity, and family income.
- oo Reasons for riding BART and/or other forms of rapid transit.

Preliminary Interviews - N=40

The preliminary interviews were gathered on the U.C. Berkeley campus, at the downtown Berkeley BART station, and at points along the Humphrey-Go-BART shuttle bus route. Interviews were conducted on the scene. The student populations include students of three institutions: University of California at Berkeley, Mills College in Oakland, and City College of San Francisco.

Second Stage Interviews - N=38

The second stage interview respondents were selected principally through field contacts at the BART stations near eight of the ten college institutions, and in areas on the campuses of these institutions. No student interviews were conducted at two institutions: John F. Kennedy University and the University of San Francisco. However, administrators were interviewed at both of these schools.

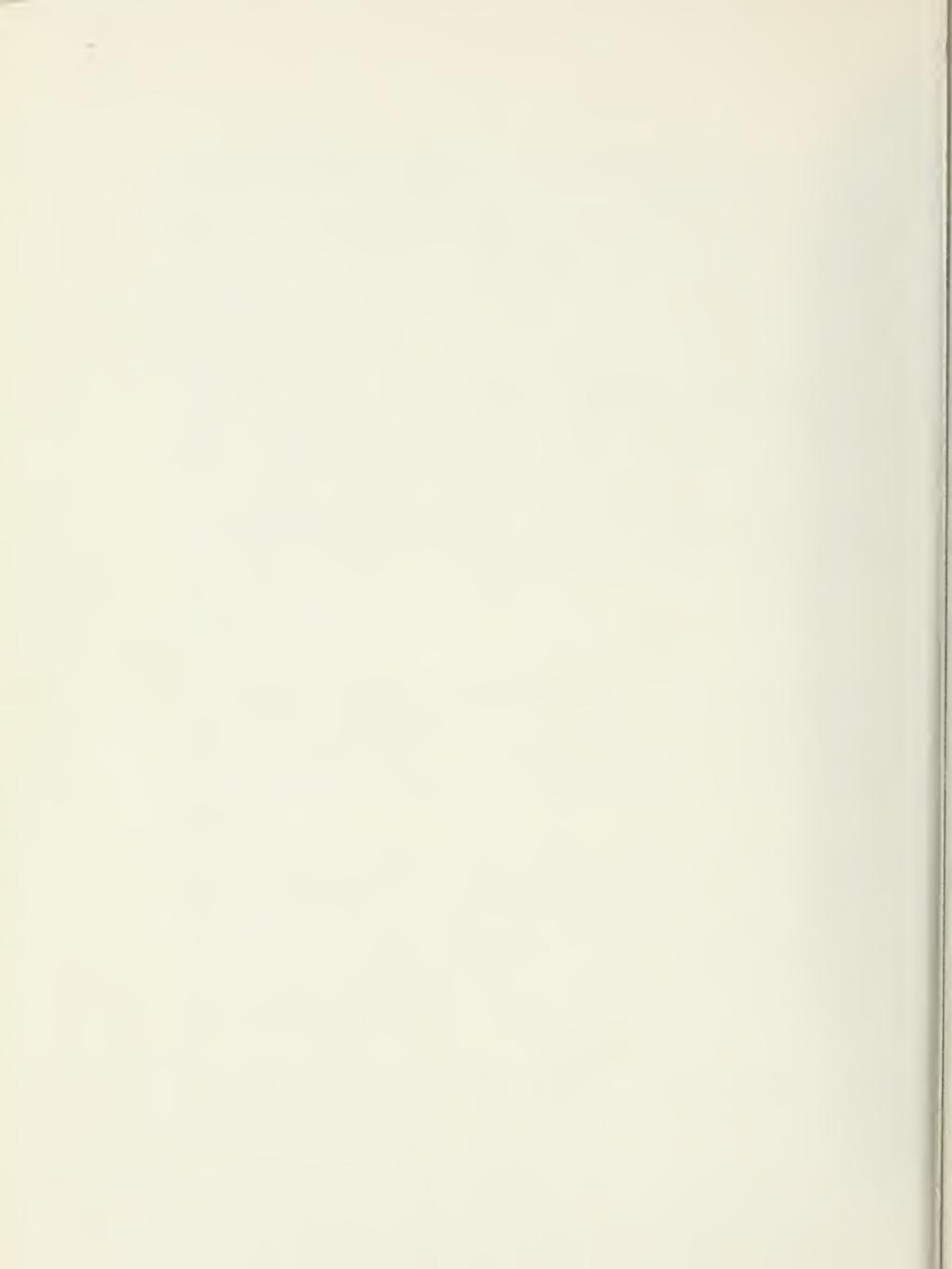
Potential student respondents were approached by sight in BART stations and at campus bus stops; they were asked whether they rode BART regularly, and whether they would consent to an interview of 30 to 45 minutes duration. If so, they were interviewed on the spot or at a comfortable place nearby. After several unsuccessful attempts to follow up on stated consents to being interviewed at later times, the latter method was abandoned.

In dealing with impact of BART on institutions, it was necessary to rely entirely on the statements of official informants, and on survey data provided by them where available, for all quantitative estimates of BART ridership among students and for other institutional characteristics. Wherever possible, however, independent inquiries were made of students and other officials, to check the information provided. Personal observations were also made of patterns of activity and ethos at specific campuses.

In the analysis of the institutional data, emphasis was laid on creating a coherent profile, dealing with most of the interview issues, describing not only the BART ridership at the campus (since this usually was not available in quantitative terms), but also the institution's entire relation to issues of transportation, student residence patterns, parking, and rapid transit. The analysis of the student interviews treats them primarily as a whole group of "college and university students," rather than as students at particular institutions. However, institutional affiliations and other personal characteristics are given in the text where they seem relevant.

As indicated in the section on the meanings of life style used here, that term has been considered to refer to a "cultural" variable, research on

which must necessarily involve the investigators' imaginative insight into meanings which the actors under study typically assign to the events of their lives. Data-gathering and analysis were approached inductively, with an effort to discover the actors' experience of their own relations to BART and to campus commuting more generally. An attempt was made to let the relevant categories of analysis arise naturally in the course of data-gathering, informed by the main focus and purpose of the sub-study. This has necessarily involved personal interpretations by the investigator in the analytic process. Data gathered in this way, and analyses so constructed, are not strictly either provable or disprovable, as Honigmann has pointed out (1976, p.250). However, they are contestable and supportable, through a continuing process of refinement of data and debate. For this reason, many of the original data are provided in the text of the Findings section, to allow others to make alternative interpretations as they see fit, and to give the rich flavor of the interviews in relation to the issues discussed. Finally, issues in the second-stage interviews and the analysis were chosen in part for a balance between strict concern with the issues of life style and the need to let BART's student riders speak directly to those concerned with the Bay Area transportation policy, at the campuses which they attend, and in the administration of the Metropolitan Transportation Commission.



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